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Reading eggs

7th Grade Worksheet Bundle:

Volume Two

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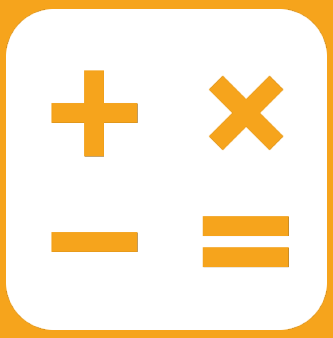

Math Activities

Grade 7 Math: Multi-Step Ratio Problems

1. David used to $14\frac{1}{4}$ pounds of clay to make 3 pots. At this rate, how many pounds of clay would he need make 10 pots?

- **A.** $24\frac{1}{4}$ pounds
- **B.** $47\frac{1}{2}$ pounds
- **C.** $40\frac{3}{4}$ pounds
- **D.** $4\frac{3}{4}$ pounds

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2. Willie runs 5 miles in 30 minutes. If Willie runs at the same rate, how many miles can he run in 36 minutes?

- **A.** 6
- **B.** 8
- **C.** 4
- **D.** 10

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3. Mr. Wells runs a telecommunications company. While going through the company's project records, he found that there were 8 engineers under every team leader and 5 project managers for every 50 engineers. Mr. Wells currently employs 15 team leaders.

How many project managers are employed by Mr. Wells?

- **A.** 32 project managers
- **B.** 12 project managers
- **C.** 24 project managers
- **D.** 16 project managers

4. Rachel is training for a cycling tournament. She can bike $2\frac{1}{4}$ miles in $\frac{1}{5}$ of an hour. At this rate, how many miles can she bike in $1\frac{1}{3}$ hours?

- **A.** $12\frac{7}{12}$ miles
- **B.** 15 miles
- **C.** 45 miles
- **D.** $11\frac{1}{4}$ miles

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5. Amanda is making pastry dough. She mixes $\frac{1}{3}$ of a cup of flour and $\frac{1}{5}$ of a cup of sugar. If she wants to mix flour and sugar in the same ratio to make 16 cups of pastry dough, how many cups of flour and sugar will she need?

Cups of Flour	$\frac{1}{3}$	
Cups of Sugar	$\frac{1}{5}$	
Total Cups of Pastry Dough		16

- **A.** 11 cups of flour and 5 cups of sugar
- **B.** 12 cups of flour and 4 cups of sugar
- **C.** 10 cups of flour and 6 cups of sugar
- **D.** 9 cups of flour and 7 cups of sugar

6. Mike is making a nut mixture for an upcoming camping trip. He makes the mixture by combining $\frac{1}{3}$ of a cup of cashews and $\frac{1}{4}$ of a cup of almonds. If he wants to add cashews and almonds in the same ratio to make 28 cups of the mixture, how many cups of cashews and almonds will he need?

- **A.** 13 cups of cashews and 15 cups of almonds
- **B.** 12 cups of cashews and 16 cups of almonds
- **C.** 16 cups of cashews and 12 cups of almonds
- **D.** 18 cups of cashews and 10 cups of almonds

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7. Adrian eats 7 fries for every chicken finger on his plate. If there are 4 chicken fingers on his plate, how many fries will he eat?

- **A.** 16
- **B.** 3
- **C.** 11
- **D.** 28

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8. Margaret is making strawberry milkshakes for the kids' party. The recipe calls for $\frac{2}{3}$ of a cup of strawberry syrup to make 10 milkshakes. How many cups of strawberry syrup are needed to make 60 milkshakes.?

- **A.** 4
- **B.** 20
- **C.** 40
- **D.** 5

9. Jason is making punch by mixing $\frac{1}{2}$ of a cup of orange juice and $\frac{1}{5}$ of a cup of mango juice. He wants to mix the orange juice and mango juice in the same ratio to make 21 cups of punch. Use the table to determine how many cups of orange juice and mango juice he will need.

Cups of Orange Juice	$\frac{1}{2}$		
Cups of Mango Juice	$\frac{1}{5}$		
Total Cups of Punch			21

- **A.** 11 cups of orange juice and 10 cups of mango juice
- **B.** 14 cups of orange juice and 7 cups of mango juice
- **C.** 12 cups of orange juice and 9 cups of mango juice
- **D.** 15 cups of orange juice and 6 cups of mango juice

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10. Tia owns a fruit shop and is selling a fresh lot of apples and oranges. She wants the ratio of apples to oranges sold to be 4 to 2. Tia wants to sell a total of 60 apples and oranges. How many apples should she sell?

- **A.** 40 apples
- **B.** 36 apples
- **C.** 10 apples
- **D.** 58 apples

Answers: Multi-Step Ratio Problems

1. B
2. A
3. B
4. B
5. C
6. C
7. D
8. A
9. D
10. A

Explanations

1. First, find the number of pounds of clay used for each pot by finding the unit rate. To find the unit rate, divide the amount of clay by the number of pots. To divide the numbers, write both numbers as fractions with a common denominator and divide the numerators.

$$\begin{aligned} 14\frac{1}{4} \div 3 &= \frac{57}{4} \div \frac{12}{4} \\ &= \frac{57}{12} \\ &= 4\frac{3}{4} \end{aligned}$$

So, David used $4\frac{3}{4}$ pounds of clay for each pot.

Next, find the amount of clay David would use to make 10 pots by multiplying the unit rate, $4\frac{3}{4}$, by 10.

$$\begin{aligned} 4\frac{3}{4} \times 10 &= \frac{19}{4} \times \frac{10}{1} \\ &= \frac{190}{4} \\ &= \frac{95}{2} \\ &= 47\frac{1}{2} \end{aligned}$$

So, David would need $47\frac{1}{2}$ **pounds** of clay to make 10 pots.

2. Set up a proportion in terms of miles to minutes and solve.

$$\frac{5}{30} = \frac{x}{36}$$
$$(30)(x) = (5)(36)$$
$$30x = 180$$
$$x = 6$$

Therefore, he can run **6** miles.

3. Mr. Wells employs 15 team leaders in his company. As 8 engineers are working under every team leader, the number of engineers, *x*, employed by Mr. Wells is as follows.

$$\frac{8 \text{ engineers}}{1 \text{ team leader}} = \frac{x}{15 \text{ team leaders}}$$
$$120 \text{ (engineers)(team leaders)} = x \text{ team leaders}$$
$$120 \text{ engineers} = x$$

Mr. Wells employs 120 engineers, and for every 50 engineers, the company has 5 project managers. To determine the number of project managers, *y*, employed by Mr. Wells, set up a proportion and solve.

$$\frac{50 \text{ engineers}}{5 \text{ project managers}} = \frac{120 \text{ engineers}}{y}$$
$$50y \text{ engineers} = 600 \text{ (project managers)(engineers)}$$
$$y = 12 \text{ project managers}$$

So, **12 project managers** are employed by Mr. Wells.

4. First, find the number of miles Rachel can bike per hour by finding the unit rate. To find the unit rate, divide the number of miles by the number of hours. To divide the numbers, write both numbers as fractions with a common denominator and divide the numerators.

$$2\frac{1}{4} \div \frac{1}{5} = \frac{9}{4} \div \frac{1}{5}$$
$$= \frac{45}{20} \div \frac{4}{20}$$
$$= \frac{45}{4}$$
$$= 11\frac{1}{4}$$

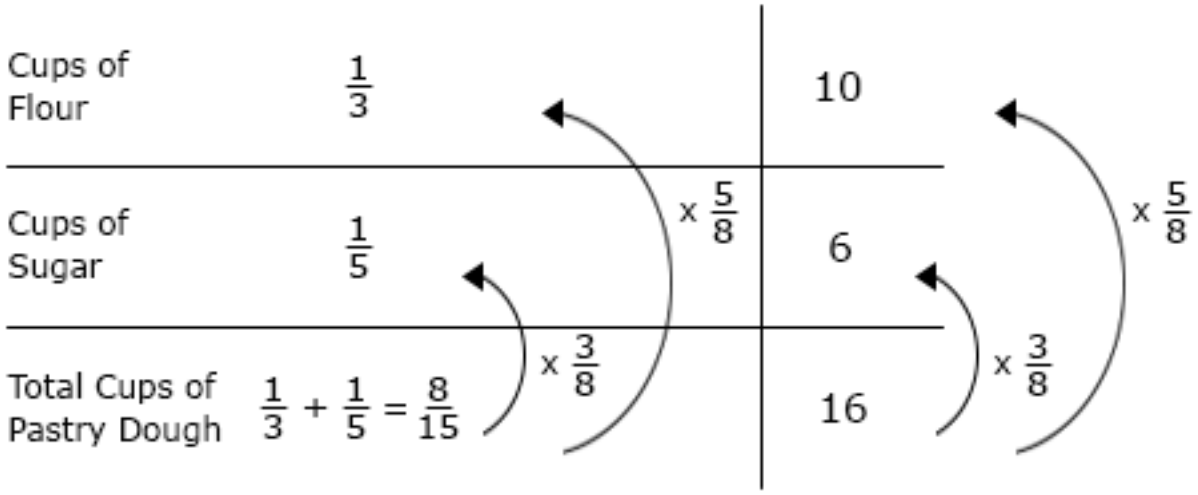
So, Rachel can bike $11\frac{1}{4}$ miles in one hour.

Next, find the number of miles Rachel can bike in $1\frac{1}{3}$ hours by multiplying the unit rate, $11\frac{1}{4}$, by $1\frac{1}{3}$ hours.

$$11\frac{1}{4} \times 1\frac{1}{3} = \frac{45}{4} \times \frac{4}{3}$$
$$= \frac{45}{3}$$
$$= 15$$

So, Rachel can bike **15 miles** in $1\frac{1}{3}$ hours.

5. First, find out what fraction of the pastry dough is flour and what fraction of the pastry dough is sugar. Then, multiply the fractions obtained by 16.



Therefore, Amanda will need **10 cups of flour and 6 cups of sugar**.

6. First, find how much of the mixture Mike begins with.

$$\frac{1}{3} + \frac{1}{4} = \frac{7}{12}$$

Next, find out what fraction of the mixture is cashews and what fraction of the mixture is almonds.

$$\frac{1}{3} \div \frac{7}{12} = \frac{1}{3} \cdot \frac{12}{7} = \frac{4}{7}$$
$$\frac{1}{4} \div \frac{7}{12} = \frac{1}{4} \cdot \frac{12}{7} = \frac{3}{7}$$

Then, multiply these fractions by 28.

$$\frac{4}{7} \cdot 28 = 16$$
$$\frac{3}{7} \cdot 28 = 12$$

Therefore, Mike will need **16 cups of cashews and 12 cups of almonds**.

7. Set up a proportion in terms of fries to chicken fingers and solve.

$$\frac{7}{1} = \frac{x}{4}$$
$$(1)(x) = (7)(4)$$
$$x = 28$$

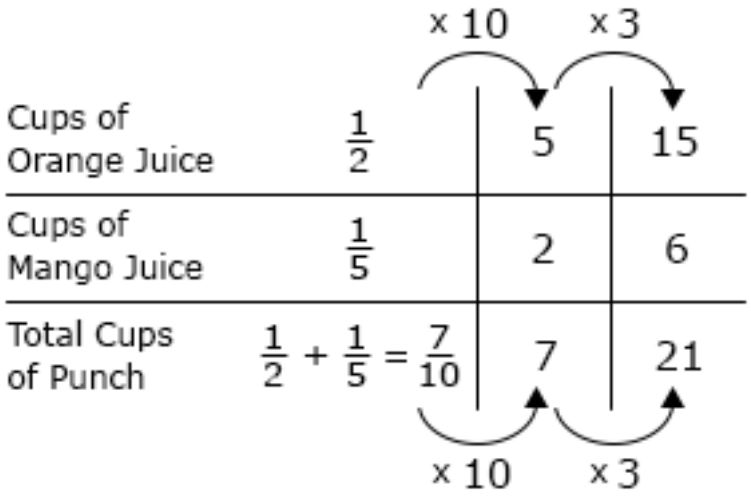
Therefore, Adrian will eat **28** fries if he eats 4 chicken fingers.

8. Set up a proportion in terms of cups of strawberry syrup to milkshakes and solve.

$$\frac{\frac{2}{3}}{10} = \frac{x}{60}$$
$$(10)(x) = \left(\frac{2}{3}\right)(60)$$
$$10x = 40$$
$$x = 4$$

Therefore, **4** cups of strawberry syrup are needed to make 60 milkshakes.

9. First, make 10 batches of punch because that will lead to a whole number for cups of punch. To make 10 batches, Jason needs 10 times as many cups of orange juice and 10 times as many cups of mango juice. So, he needs 5 cups of orange juice and 2 cups of mango juice. Now, for 21 cups of punch, Jason will need 3 times the whole number of cups of orange juice and mango juice.



Therefore, Jason will need **15 cups of orange juice and 6 cups of mango juice**.

10. Tia wants the sales ratio of number of apples sold to the number of oranges sold to be 4 to 2. This means that for every 6 apples and oranges sold, 4 are apples, or $\frac{4}{6}$of the total apples and oranges are apples.

Let *n* be equal to the total number of apples. Then, *n* out of 60 of the fruits sold are apples.

To find *n*, set up the following proportion and solve.

$$\frac{4}{6} = \frac{n}{60}$$
$$240 = 6n$$
$$40 = n$$

Therefore, Tia needs to sell **40 apples**.

Grade 7 Math: Multi-Step Percent Problems

1. Sam opened a money-market account that pays 3% simple interest. He started the account with $7,000 and made no further deposits. When he closed the account, he had earned $1,050 in interest. How long did he keep his account open?

- **A.** 7 years
- **B.** 8 years
- **C.** 6 years
- **D.** 5 years

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2. Amy bought a box of chocolates originally priced at $14. She received a 15% discount on the original price, and then she paid a 4% sales tax on the purchase price. What is the total amount that Amy paid for the box of chocolates?

- **A.** $11.90
- **B.** $15.46
- **C.** $12.38
- **D.** $16.10

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3. Maria works for an automobile dealership. She earns a 10% commission on each motorcycle she sells and a 15% commission on each car she sells.

Maria sells a motorcycle for $5,000 and a car for $25,000. What is the total commission that she will earn on the sale of these two vehicles?

- **A.** $4,850
- **B.** $5,000
- **C.** $5,500
- **D.** $4,250

4. A pair of shoes usually sells for $69. If the shoes are 30% off, and sales tax is 6%, what is the total price of the shoes including tax?

- **A.** $47.54
- **B.** $51.68
- **C.** $54.86
- **D.** $51.20

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5. Martha estimated there were 87 marbles in a jar for a contest. The actual number of marbles in the jar was 109. What was the percent error of Martha's estimation?

- **A.** 79.82%
- **B.** 20.18%
- **C.** 22%
- **D.** 25.29%

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6. Tessa bought stock in a restaurant for $170.00. Her stock is now worth $251.60. What is the percentage increase of the value of Tessa's stock?

- **A.** 68%
- **B.** 48%
- **C.** 82%
- **D.** 32%

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7. Jane moved from a house with 61 square feet of closet space to an apartment with 36.6 square feet of closet space. What is the percentage decrease of Jane's closet space?

- **A.** 67%
- **B.** 32%
- **C.** 60%
- **D.** 40%

8. The salaries of three employees are listed below. Each employee was recently given a raise.

Employee Salaries

Employee	Salary before raise	Raise
Jane	$41,400	4%
John	$43,900	4.5%
Jack	$39,400	3%

Which amount is closest to the total of all three raises?

- **A.** $10,600
- **B.** $4,814
- **C.** $4,739
- **D.** $14,341

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9. A zookeeper predicted the weight of a new baby elephant to be 265 pounds when it was born. The elephant actually weighed 297 pounds at birth. What was the percent error of the zookeeper's prediction?

- **A.** 32%
- **B.** 10.77%
- **C.** 12.08%
- **D.** 89.23%

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10. Jason and his friend went to a restaurant for dinner. The food that they ordered cost $25. A 7% sales tax was applied to the total. After the sales tax was applied, Jason paid a 15% tip on the total bill. How much did Jason pay at the restaurant?

- **A.** $26.75
- **B.** $30.50
- **C.** $28.75
- **D.** $30.76

Answers: Multi-Step Percent Problems

1. D
2. C
3. D
4. D
5. B
6. B
7. D
8. B
9. B
10. D

Explanations

1. The formula for computing simple interest is shown below, where *p* is the principal (starting) amount, *r* is the interest rate (in decimal form), and *t* is the time (in years).

$$I = prt$$

The principal is \$7,000, the rate is 3%, or 0.03, and the interest is \$1,050.

Substitute these amounts into the given formula, and simplify.

$$\begin{aligned} \$1{,}050 &= (\$7{,}000)(0.03)(t) \\ \frac{\$1{,}050}{(\$7{,}000)(0.03)} &= t \\ 5 \text{ yr} &= t \end{aligned}$$

So, Sam kept his account open for **5 years**.

2. The original price of the box of chocolates was \$14. Amy received a 15% discount on the original price.

Let *x* be the amount of discount, in dollars.

To find the amount of discount, in dollars, create a proportion.

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100}$$

In the above equation, the whole is \$14, and the percent is 15%. Use these numbers with the given equation to solve for the unknown part, *x*.

$$\frac{x}{14} = \frac{15}{100}$$

$$x = \frac{(15)(14)}{100}$$

$$x = 2.1$$

So, the discount is \$2.10. To find the sale price, subtract the discount from the original price.

$$14.00 - 2.10 = 11.90$$

Therefore, the sale price of the box of chocolates was \$11.90.

Now, there is 4% sales tax on the purchase. Let *s* be the amount of sales tax, in dollars.

To find the amount of sales tax, create a proportion.

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100}$$

In the above equation, the whole is \$11.90, and the percent is 4%. Use these numbers with the given equation to solve for the unknown part, *s*.

$$\frac{s}{11.9} = \frac{4}{100}$$

$$s = \frac{(4)(11.9)}{100}$$

$$s = 0.476$$

Since the smallest unit of money is cents, or hundredths of a dollar, the sales tax was \$0.48. To find the total amount Amy paid for the box of chocolates, add the sales tax to the sale price.

$$11.90 + 0.48 = 12.38$$

Therefore, the total amount that Amy paid for the box of chocolates is **\$12.38**.

3. Maria earns a 10% commission on the sale of a motorcycle. She sells a motorcycle for \$5,000. Let *m* be the amount of commission Maria earns, in dollars, on the motorcycle.

To find the commission Maria earns on the motorcycle, create a proportion.

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100}$$

In the above equation, the whole is \$5,000, and the percent is 10%. Use these numbers with the given equation to solve for the unknown part, *m*.

$$\frac{m}{5{,}000} = \frac{10}{100}$$

$$m = \frac{(10)(5{,}000)}{100}$$

$$m = 500$$

So, the commission for the sale of the motorcycle is $500.

Maria earns a 15% commission on the sale of a car. She sells a car for $25,000. Let *c* be the amount of commission Maria earns, in dollars, on the car.

To find the commission Maria earns on the car, create a proportion.

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100}$$

In the above equation, the whole is $25,000, and the percent is 15%. Use these numbers with the given equation to solve for the unknown part, *c*.

$$\frac{c}{25{,}000} = \frac{15}{100}$$

$$c = \frac{(15)(25{,}000)}{100}$$

$$c = 3{,}750$$

So, the commission for the sale of the car is $3,750.

To find the total amount of commission Maria earns, add the motorcycle and car commission amounts.

$$500 + 3{,}750 = 4{,}250$$

Therefore, the total amount of commission Maria earns is **$4,250**.

4. To figure out the cost of the discount before tax, multiply the original price by 30%. Then, subtract the discount from the original price. Convert 30% to 0.3.

$$\$69 - (\$69 \times 0.3) = \$69 - \$20.70$$

$$= \$48.30$$

Now, add the 6% sales tax. Convert 6% to 0.06.

$$\$48.30 + (\$48.30 \times 0.06) = \$48.30 + \$2.90$$

$$= \$51.20$$

The total price of the shoes, including tax, is **$51.20**.

5. Percent error can be calculated using the following formula.

$$\text{Percent Error} = \frac{|\text{Estimated Value} - \text{Actual Value}|}{\text{Actual Value}} \times 100$$

Identify the estimated value and the actual value.

$$\text{Estimated Value} = 87$$
$$\text{Actual Value} = 109$$

Calculate the percent error using the formula above to obtain the final answer.

$$\text{Percent Error} = \frac{|\text{Estimated Value} - \text{Actual Value}|}{\text{Actual Value}} \times 100$$
$$= \frac{|87 - 109|}{109} \times 100$$
$$= \frac{22}{109} \times 100$$
$$\approx 0.2018 \times 100$$
$$= 20.18\%$$

The percent error is **20.18%**.

6. First, find the difference between the two stock values.

$$\$251.60 - \$170.00 = \$81.60$$

Then, divide by the original price of the stock, and convert to a percent.

$$\frac{\$81.60}{\$170.00} = 0.48$$
$$= 48\%$$

The percentage increase of the value of Tessa's stock is **48%**.

7. First, find the difference between the two amounts of closet space.

$$61 \text{ sq ft} - 36.6 \text{ sq ft} = 24.4 \text{ sq ft}$$

Then, divide by the amount of closet space Jane had in the house, and convert to a percent.

$$\frac{24.4 \text{ sq ft}}{61 \text{ sq ft}} = 0.4$$
$$= 40\%$$

The percentage decrease of Jane's closet space is **40%**.

8. The raise percentages are all different, and the salary amounts are all different.

First, find the raise amount for each employee separately.

Jane: 4% of \$41,400 = 0.04(\$41,400) = \$1,656
John: 4.5% of \$43,900 = 0.045(\$43,900) = \$1,975.50
Jack: 3% of \$39,400 = 0.03(\$39,400) = \$1,182

Now, find the sum of all three raise amounts.

\$1,656 + \$1,975.50 + \$1,182 = \$4,813.50

Therefore, the amount closest to the total is **\$4,814**.

9. Percent error can be calculated using the following formula.

$$\text{Percent Error} = \frac{|\text{Estimated Value} - \text{Actual Value}|}{\text{Actual Value}} \times 100$$

Identify the estimated value and the actual value.

$$\text{Estimated Value} = 265$$
$$\text{Actual Value} = 297$$

Calculate the percent error using the formula above to obtain the final answer.

$$\begin{aligned}\text{Percent Error} &= \frac{|\text{Estimated Value} - \text{Actual Value}|}{\text{Actual Value}} \times 100 \\ &= \frac{|248 - 280|}{280} \times 100 \\ &= \frac{32}{280} \times 100 \\ &\approx 0.1143 \times 100 \\ &= 11.43\%\end{aligned}$$

The percent error is **11.43%**.

10. The food Jason and his friend ordered cost \$25, and a 7% sales tax was applied to that amount.

Let *s* be the amount of sales tax, in dollars, for an order of food that cost \$25.

To find the amount of sales tax, in dollars, create a proportion.

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100}$$

In the above equation, the whole is \$25, and the percent is 7%. Use these numbers with the given equation to solve for the unknown part, *s*.

$$\frac{s}{25} = \frac{7}{100}$$

$$s = \frac{(7)(25)}{100}$$

$$s = 1.75$$

So, the amount of sales tax is \$1.75. To find the total bill, add the sales tax to the price of the food.

$$25 + 1.75 = 26.75$$

Therefore, the total bill after sales tax is \$26.75.

Jason paid a 15% tip on the total bill of \$26.75. Let *t* be the tip amount, in dollars. To find the tip amount, create a proportion.

$$\frac{\text{part}}{\text{whole}} = \frac{\text{percent}}{100}$$

In the above equation, the whole is \$26.75, and the percent is 15%. Use these numbers with the given equation to solve for the unknown part, *t*.

$$\frac{t}{26.75} = \frac{15}{100}$$

$$t = \frac{(15)(26.75)}{100}$$

$$t = 4.0125$$

Since the smallest unit of money is cents, or hundredths of a dollar, the tip Jason paid was \$4.01. To find the amount Jason paid at the restaurant, add the tip amount to the total bill.

$$26.75 + 4.01 = 30.76$$

Therefore, Jason paid a total of **\$30.76** at the restaurant.

Grade 7 Math: Properties of Addition & Subtraction

1. Indicate which property is illustrated in Step 1.

Step 1	$7 + (3 + 7) + 0 = 7 + (7 + 3) + 0$
Step 2	$= (7 + 7) + (3 + 0)$
Step 3	$= (7 + 7) + 3$
Step 4	$= 14 + 3$

- **A.** associative property of addition
- **B.** commutative property of addition
- **C.** identity property of addition
- **D.** commutative property of multiplication

---

2. Use properties of rational numbers to simplify the expression.

$$\frac{3}{5} + \frac{7}{15} + \frac{2}{5}$$

- **A.** $\frac{4}{5}$
- **B.** $\frac{3}{5}$
- **C.** $1\frac{1}{10}$
- **D.** $1\frac{7}{15}$

---

3. Indicate which property is illustrated in Step 3.

Step 1	$4 + (7 + 5) + 0 = 4 + (5 + 7) + 0$
Step 2	$= (4 + 5) + (7 + 0)$
Step 3	$= (4 + 5) + 7$
Step 4	$= 9 + 7$

- **A.** identity property of multiplication
- **B.** associative property of addition
- **C.** identity property of addition
- **D.** commutative property of multiplication

4. Evaluate the given expression.

$$2\frac{6}{7} - \frac{5}{7} + 1\frac{4}{7}$$

- **A.** $3\frac{3}{7}$
- **B.** $1\frac{2}{7}$
- **C.** $5\frac{1}{7}$
- **D.** $3\frac{5}{7}$

---

5. Evaluate the given expression.

$$0.4 - 0.2 + 0.8 + (-0.8)$$

- **A.** -0.2
- **B.** 0.2
- **C.** 0.6
- **D.** -0.6

---

6. Simplify the following expression.

$$\frac{3}{8} + \left(-\frac{2}{7}\right)$$

- **A.** $\frac{5}{56}$
- **B.** $\frac{9}{56}$
- **C.** $\frac{3}{56}$
- **D.** $\frac{7}{56}$

7.Evaluate the given expression.

$$-5\frac{7}{12} + 3\frac{9}{12} - 2\frac{5}{12}$$

- **A.** $-3\frac{3}{4}$
- **B.** $-4\frac{1}{4}$
- **C.** $-4\frac{7}{12}$
- **D.** $-5\frac{3}{4}$

---

8. Use properties of rational numbers to simplify the expression.

$$\frac{17}{21} - \left(\frac{5}{7} + \frac{4}{7}\right)$$

- **A.** $2\frac{2}{21}$
- **B.** $-\frac{16}{21}$
- **C.** $-\frac{10}{21}$
- **D.** $\frac{2}{3}$

---

9. Simplify the following expression.

$$-45.93 + 112 + (-61.24)$$

- **A.** 5.83
- **B** 5.17
- **C.** 4.83
- **D.** 4.17

---

10. Evaluate the given expression.

$$13.7 - 11.8 + 14.3 + (-14.3)$$

- **A.** 1.9
- **B.** 25.5
- **C.** -25.5
- **D.** -1.9

Answers: Properties of Addition & Subtraction

1. B
2. D
3. C
4. D
5. B
6. A
7. B
8. C
9. C
10. A

Explanations

1. The property illustrated in Step 1 is the **commutative property of addition**.

The commutative property of addition states that adding terms together in any order results in the same sum.

2. Use the commutative and associative properties of addition to simplify.

$$\begin{aligned} \frac{3}{5}+\frac{7}{15}+\frac{2}{5} &= \frac{3}{5}+\frac{2}{5}+\frac{7}{15} \\ &= \left(\frac{3}{5}+\frac{2}{5}\right)+\frac{7}{15} \\ &= \frac{5}{5}+\frac{7}{15} \\ &= 1+\frac{7}{15} \\ &= 1\frac{7}{15} \end{aligned}$$

3. The property illustrated in Step 3 is the **identity property of addition**.

The identity property of addition states that a number remains unchanged after the addition of zero.

4. To evaluate the given expression, first rewrite the expression using addition.

$$2+\frac{6}{7}+\left(-\frac{5}{7}\right)+1+\frac{4}{7}$$

Then, apply the commutative property as shown.

$$2+1+\frac{6}{7}+\left(-\frac{5}{7}\right)+\frac{4}{7}$$

Finally, simplify the expression as shown.

$$3 + \frac{1}{7} + \frac{4}{7}$$
$$3 + \frac{5}{7}$$
$$3\frac{5}{7}$$

5. To evaluate the expression, use properties of operations. First, recognize that -0.8 is the additive inverse of 0.8. A number and its additive inverse have a sum of 0.

$$0.4 - 0.2 + 0.8 + (-0.8) = 0.4 - 0.2 + 0$$

Now, subtract 0.2 from 0.4.

$$0.4 - 0.2 + 0 = 0.4 + (-0.2) + 0$$
$$= 0.2 + 0$$

Finally, apply the additive identity property which states that the sum of 0 and a number is the number.

$$0.2 + 0 = 0.2$$

6. To add two rational numbers with different signs, subtract the smaller absolute value from the larger absolute value and give the result the sign of the number with the larger absolute value.

$$\frac{3}{8} + \left(-\frac{2}{7}\right) = \left|\frac{3}{8}\right| - \left|-\frac{2}{7}\right|$$
$$= \frac{3}{8} - \frac{2}{7}$$
$$= \frac{21}{56} - \frac{16}{56}$$
$$= \frac{21 - 16}{56}$$
$$= \frac{5}{56}$$

7. To evaluate the given expression, first rewrite the expression using addition.

$$-5 + \left(-\frac{7}{12}\right) + 3 + \frac{9}{12} + (-2) + \left(-\frac{5}{12}\right)$$

Then, apply the commutative property as shown.

$$(-5) + 3 + (-2) + \left(-\frac{7}{12}\right) + \frac{9}{12} + \left(-\frac{5}{12}\right)$$

Finally, simplify the expression as shown.

$$(-2) + (-2) + \frac{2}{12} + \left(-\frac{5}{12}\right)$$
$$-4 + \left(-\frac{3}{12}\right)$$
$$-4 + \left(-\frac{1}{4}\right)$$
$$-4\,\frac{1}{4}$$

8. Use the additive inverse to simplify.

$$\begin{aligned}\frac{17}{21} - \left(\frac{5}{7} + \frac{4}{7}\right) &= \frac{17}{21} - \left(\frac{9}{7}\right)\\ &= \frac{17}{21} + \left(-\frac{9}{7}\right)\\ &= \frac{17}{21} + \left(-\frac{27}{21}\right)\\ &= -\frac{10}{21}\end{aligned}$$

9. To add two rational numbers with different signs, subtract the smaller absolute value from the larger absolute value and give the result the sign of the number with the larger absolute value.

$$\begin{aligned}-45.93 + 112 + (-61.24) &= |112| - |-45.93| + (-61.24)\\ &= 112 - 45.93 + (-61.24)\\ &= 66.07 + (-61.24)\end{aligned}$$

Then, repeat the process again to add two rational numbers with different signs.

$$\begin{aligned}66.07 + (-61.24) &= |66.07| - |-61.24|\\ &= 66.07 - 61.24\\ &= 4.83\end{aligned}$$

10. To evaluate the expression, use properties of operations. First, recognize that -14.3 is the additive inverse of 14.3. A number and its additive inverse have a sum of 0.

$$13.7 - 11.8 + 14.3 + (-14.3) = 13.7 - 11.8 + 0$$

Now, subtract 11.8 from 13.7.

$$\begin{aligned}13.7 - 11.8 + 0 &= 13.7 + (-11.8) + 0\\ &= 1.9 + 0\end{aligned}$$

Finally, apply the additive identity property which states that the sum of 0 and a number is the number.

$$1.9 + 0 = 1.9$$

Grade 7 Math: Properties of Multiplication & Division

1. Barney has $17\frac{2}{3}$ feet of lumber that he is going to cut into 4 equal pieces for a border on his garden. Which of the following is true?

- **A.** Each piece of lumber is $1\frac{5}{12}$ feet long.
- **B.** Each piece of lumber is $4\frac{5}{12}$ feet long.
- **C.** Each piece of lumber is $13\frac{2}{3}$ feet long.
- **D.** Each piece of lumber is $4\frac{1}{4}$ feet long.

---

2. Indicate which property is illustrated in Step 3.

Step 1	$6 \div 3 + 9 \div 1 = (6 \div 3) + (9 \div 1)$
Step 2	$= 2 + (9 \div 1)$
Step 3	$= 2 + 9$

- **A.** commutative property of division
- **B.** identity property of division
- **C.** distributive property
- **D.** identity property of addition

---

3. Barney has $20\frac{2}{3}$ feet of lumber that he is going to cut into 4 equal pieces for a border on his garden. Which of the following is true?

- **A.** Each piece of lumber is $16\frac{2}{3}$ feet long.
- **B.** Each piece of lumber is $5\frac{1}{6}$ feet long.
- **C.** Each piece of lumber is $1\frac{2}{3}$ feet long.
- **D.** Each piece of lumber is $15\frac{1}{2}$ feet long.

4. Simplify.

$$5 \times 12 \times -9$$

- **A.** 540
- **B.** 108
- **C.** -540
- **D.** -108

---

5. Simplify.

$$63 \times (-14) \div -42$$

- **A.** -21
- **B.** 21
- **C.** -14
- **D.** 14

---

6. A diver descended at a constant rate of 16.11 feet every 3 minutes. Which of the following is true?

- **A.** After one minute, the diver was at -8.055 feet.
- **B.** After one minute, the diver was at -5.37 feet.
- **C.** After one minute, the diver was at 5.37 feet.
- **D.** After one minute, the diver was at 8.055 feet.

---

7. Use properties of operations to find the quotient.

$$-9.6 \div 8$$

- **A.** -1.2
- **B.** -1.6
- **C.** 1.2
- **D.** 1.6

8. Use properties of operations to find the quotient.

$$-15 \div (-4.8)$$

- **A.** 3.125
- **B.** 0.32
- **C.** 72
- **D.** -19.8

---

9. Indicate which property is illustrated in Step 1.

Step 1	$2 \cdot 6 \cdot 7 \cdot 1 = (2 \cdot 6) \cdot (7 \cdot 1)$
Step 2	$= (6 \cdot 2) \cdot (1 \cdot 7)$
Step 3	$= 12 \cdot (1 \cdot 7)$
Step 4	$= 12 \cdot 7$

- **A.** commutative property of multiplication
- **B.** associative property of multiplication
- **C.** commutative property of addition
- **D.** associative property of addition

---

10. A ceiling fan can rotate 150.5 times per minute. The fan rotated a total of 2,426.06 times. Which of the following is true?

- **A.** The fan rotated for 17.12 minutes.
- **B.** The fan rotated for 18.12 minutes.
- **C.** The fan rotated for 16.12 minutes.
- **D.** The fan rotated for 15.12 minutes.

Answers: Properties of Multiplication & Division

1. B
2. B
3. B
4. C
5. B
6. B
7. A
8. A
9. B
10. C

Explanations

1. To find the length of each piece of lumber, divide the total by 4.

$$\begin{aligned} 17\tfrac{2}{3}\,\text{feet} \div 4 &= \tfrac{53}{3}\,\text{feet} \div \tfrac{4}{1} \\ &= \tfrac{53}{3}\,\text{feet} \times \tfrac{1}{4} \\ &= \tfrac{53}{12}\,\text{feet} \\ &= 4\tfrac{5}{12}\,\text{feet} \end{aligned}$$

Therefore, **each piece of lumber is $4\frac{5}{12}$ feet long**.

2. The property illustrated in Step 3 is the **identity property of division**.

The **identity property of division** states that a number remains unchanged after division by

one. 3. To find the length of each piece of lumber, divide the total by 4.

$$\begin{aligned} 20\tfrac{2}{3}\,\text{feet} \div 4 &= \tfrac{62}{3}\,\text{feet} \div \tfrac{4}{1} \\ &= \tfrac{62}{3}\,\text{feet} \times \tfrac{1}{4} \\ &= \tfrac{62}{12}\,\text{feet} \\ &= 5\tfrac{1}{6}\,\text{feet} \end{aligned}$$

Therefore, **each piece of lumber is $5\frac{1}{6}$ feet long**.

4. Multiply the terms from left to right. Start with the first two terms.

$$5 \times 12 = 60$$

Now, multiply the product by the third term.

A positive number multiplied by a negative number results in a negative number.

$$60 \times (-9) = -540$$

So, the answer is **-540**.

5. Multiply and divide the terms from left to right. Start with the first two terms.

A positive number multiplied by a negative number results in a negative number.

$$63 \times (-14) = -882$$

Now, divide the product by the third term.

A negative number divided by a negative number results in a positive number.

$$-882 \div (-42) = 21$$

So, the answer is **21**.

6. Divide the distance traveled, -16.11 feet, by 3 minutes. The distance traveled is negative because the diver is descending.

$$-16.11 \text{ feet} \div 3 \text{ minutes} = -5.37 \text{ feet per minute}$$

Therefore, **after one minute, the diver was at -5.37 feet**.

7. To divide -9.6 by 8, first divide the decimals ignoring the negative sign.

$$\begin{array}{r} 1.2 \\ 8\overline{)\,9.6} \\ \underline{8} \\ 16 \\ \underline{16} \\ 0 \end{array}$$

1. The decimal point in your answer will line up with the decimal point of the dividend. Fill in zeros as needed.
2. Divide 9 by 8 to get 1 plus a remainder. Place 8 below 9.
3. Subtract 8 from 9 to get 1. Bring the 6 down from 9.6.
4. Divide 16 by 8 to get 2. Place 16 below 16.
5. Subtract 16 from 16 to get 0.

Since -9.6 is negative and 8 is positive, the quotient will be negative.

Therefore, -9.6 ÷ 8 = **-1.2**.

8. To divide -15 by -4.8, first divide the decimals ignoring the negative signs.

For the divisor 4.8, move the decimal 1 place to the right to get rid of the decimal point. Do the same for the dividend.

- 4.8 becomes 48
- 15 becomes 150

Now do the division as you normally would.

```
        3.125
     )_________
48   150.000
     144
      60
      48
      120
       96
       240
       240
         0
```

1. The decimal point in your answer will line up with the decimal point of the dividend. Fill in zeros as needed.
2. Divide 150 by 48 to get 3 plus a remainder. Place 144 below 150.
3. Subtract 144 from 150 to get 6. Bring the 0 down from 150.000.
4. Divide 60 by 48 to get 1 plus a remainder. Place 48 below 60.
5. Subtract 48 from 60 to get 12. Bring the 0 down from 150.000.
6. Divide 120 by 48 to get 2 plus a remainder. Place 96 below 120.
7. Subtract 96 from 120 to get 24. Bring the 0 down from 150.000.
8. Divide 240 by 48 to get 5. Place 240 below 240.
9. Subtract 240 from 240 to get 0.

Since -15 is negative and -4.8 is negative, the quotient will be positive.

Therefore, -15 ÷ (-4.8) = **3.125**.

9. The property illustrated in Step 1 is the **associative property of multiplication**.

The **associative property of multiplication** states that numbers can be grouped in any way and multiplied together without changing the product of the numbers.

10. Divide the number of rotations by the rotations per minute.

$$2{,}426.06 \text{ rotations} \div 150.5 \text{ rotations per minute} = 16.12 \text{ minutes}$$

Therefore, **the fan rotated for 16.12 minutes**.

Grade 7 Math: Interpreting Linear Expressions

1. The number of oranges harvested from Jake's yard decreased by 5% from last year to this year. Jake used the following expression to find the number of oranges harvested this year, *P*, where *C* is the number of oranges Jake harvested last year.

$$C - 0.05C = P$$

Select the correct interpretation for the given equation.

- ○ **A.** *P* is 5% of the amount harvested by Jake last year.
- ○ **B.** *P* is 95% of the amount harvested by Jake last year.
- ○ **C.** *P* is 95% of the amount harvested by Jake this year.
- ○ **D.** *P* is 5% of the amount harvested by Jake this year.

---

2. Match the following equation to the correct situation.

$$s - s(25\%) = s(75\%)$$

- ○ **A.** The amount that Katie paid for a pair of jeans with 25% tax on *s*.
- ○ **B.** The amount that Anis owes on his car was 25% of *s*.
- ○ **C.** The price for a shirt that originally cost *s* after a 25% discount.
- ○ **D.** The amount Doug gave to the local heart association was 25% of *s*.

---

3. Two years ago, the annual membership fee at a fitness club was $*m*. Today, the annual membership fee at the club can be represented by the given expression.

$$1.05m$$

Which set of statements is true?

- ○ **A.** The annual membership fee at the fitness club increased by 5%.
  An equivalent expression that represents this situation is $m + 0.05m$.
- ○ **B** The annual membership fee at the fitness club decreased by 5%.
  An equivalent expression that represents this situation is $m - 0.05m$.
- ○ **C.** The annual membership fee at the fitness club decreased by 105%.
  An equivalent expression that represents this situation is $m - 1.05m$.
- ○ **D.** The annual membership fee at the fitness club increased by 105%.
  An equivalent expression that represents this situation is $m + 1.05m$.

4. Frances bought a new dress that was discounted by 24%. She used the following expression to find the price of the dress after the discount was applied.

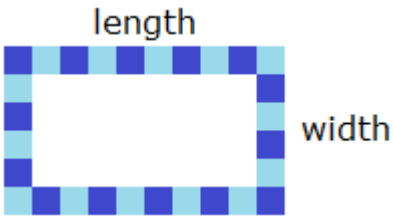
$$d - (0.24)d$$

Which of the following is another expression that could be used to get the same result, and what does it represent?

- **A.** 76*d*. This represents 76% of the original price of the dress after the discount was applied.
- **B.** 0.76*d*. This represents 76% of the original price of the dress after the discount was applied.
- **C.** *d* - 24. This represents 24% of the original price of the dress after the discount was applied.
- **D.** *d* - 0.24. This represents 0.24% of the original price of the dress after the discount was applied.

---

5. A rectangular table, like the rectangle shown below, has a border of same-sized square tiles. The rectangle has 10 tiles along the length and 6 tiles along the width for a total of 28 total tiles. Notice that 10 + 10 + 6 + 6 ≠ 28.



If the rectangular table has *l* tiles along the length and *w* tiles along the width, which of the following expressions represents the total number of tiles in the border?

I. $2l + 2w$
II. $2l + 2w + 4$
III. $2l + 2w - 4$
IV. $2(l - 2) + 2(w - 2) + 4$

- **A.** III only
- **B.** I only
- **C.** III and IV only
- **D.** II and IV only

6. Match the following equation to the correct situation.

$$2t + t = 3t$$

- **A.** The number of text messages Susie and Kristin have when Susie has 2 more than Kristin.
- **B.** The "talk" minutes that Tiffany has after adding 2 minutes to her phone.
- **C.** The temperature when Paige changes the thermostat by 2 degrees.
- **D.** The number of toys that Josh and Tony have when Tony has 2 times the number of toys as Josh.

---

7. The members at a health club decreased in number by 15% from last year to this year. The following expression was used to find the number of members in the health club this year, *T*, where *H* is the number of members in the health club last year.

$$H - 0.15H = T$$

Select the correct interpretation for the given equation.

- **A.** *H* is 0.15% of the number of members last year.
- **B.** *H* is 85% of the number of members last year.
- **C.** *H* is 0.85% of the number of members last year.
- **D.** *H* is 15% of the number of members last year.

---

8. Molly bought a handbag that was discounted by 31%. Molly used the following expression to find the cost of the handbag after the discount was applied, *D*, where *M* is the original price of the handbag.

$$M - 0.31M = D$$

Select the correct interpretation for the given equation.

- **A.** *D* is 0.31% of the original price of the handbag.
- **B.** *D* is 31% of the original price of the handbag.
- **C.** *D* is 0.69% of the original price of the handbag.
- **D.** *D* is 69% of the original price of the handbag.

9. Match the following equation to the correct situation.

$$40\%(b + \$15.00) = 40\%(b) + \$6.00$$

- **A.** Shawn owed 40% of his tuition bill, b, after paying \$6.00.
- **B.** The amount donated to a school was 40% more than \$6.00.
- **C.** Summer paid \$6.00 more than 40% of b.
- **D.** The cost for a coat was 40% of the sum of b and \$6.00.

---

10. One year ago, a cell phone model cost \$$p$. Today, the cost of the cell phone model, in dollars, can be represented by the given expression.

$$0.93p$$

Which set of statements is true?

- **A.** The cost of the cell phone model decreased by 7%.
  An equivalent expression that represents this situation is $p - 0.07p$.
- **B** The cost of the cell phone model increased by 93%.
  An equivalent expression that represents this situation is $p + 0.93p$.
- **C.** The cost of the cell phone model decreased by 93%.
  An equivalent expression that represents this situation is $p - 0.93p$.
- **D.** The cost of the cell phone model increased by 7%.
  An equivalent expression that represents this situation is $p + 0.07p$.

Answers: Interpreting Linear Expressions

1. B
2. C
3. A
4. B
5. C
6. D
7. B
8. D
9. C
10. A

Explanations

1. The number of oranges Jake harvested last year is represented by *C*. A 5% decrease in the number of oranges Jake harvested from last year to this year can be represented by (0.05)*C*.

Since the amount of oranges Jake harvests has decreased from *C* by 0.05*C*, the expression *C* – 0.05*C* represents the amount of oranges Jake harvested this year, which is *P*. This is modeled by the given equation.

$$C - 0.05C = P$$

The equation is simplified as shown below.

$$C - 0.05C = P$$

$$0.95C = P$$

So, the number of oranges Jake harvested this year can be expressed as 95% of *C*.

Therefore, the correct interpretation for the given expression would be ***P* is 95% of the amount harvested by Jake last year.**

2. In this case, *s* - *s*(25%) is taking a number and subtracting 25% of that number, which is the same as *s* times 75%.

So, **the price for a shirt that originally cost *s* after a 25% discount** is the correct answer.

3. Since the membership fee from two years ago, *m*, is multiplied by a number greater than 1, the membership fee increased from two years ago to today. Find the percent of increase by subtracting 1 from 1.05.

$$1.05 - 1 = 0.05$$

Since 0.05 is equivalent to 5%, **the annual membership fee at the fitness club increased by 5%.**

The given expression can be rewritten as the sum of the initial annual membership fee, *m*, and the amount by which the membership fee increased, 0.05*m*.

$$1.05m = m + 0.05m$$

So, **an equivalent expression that represents this situation is *m* + 0.05*m*.**

4. The original price of the dress is represented by *d*. A 24% discount on the price of the dress can be represented by 0.24*d*.

Subtracting the discount from the original price is *d* - (0.24)*d*. The expression is simplified below.

$$\begin{aligned} d - (0.24)d &= (1 - 0.24)d \\ &= 0.76d \end{aligned}$$

This represents that the price of the dress is 76% of the original price.

Therefore, another expression that could be used to get the same result is **0.76*d*..This represents 76% of the original price of the dress after the discount was applied.**

5. Notice that the 4 corner tiles are counted in both the number of tiles along the length and the number of tiles along the width.

One way to write the expression is to show 2 times the number of tiles along the length plus 2 times the number of tiles along the width minus 4 corner tiles, since they are counted twice.

$$2l + 2w - 4$$

This is expression III.

Another way to write the expression is to show 2 times the number of tiles along the length minus the 2 corners, plus 2 times the number of tiles along the width minus the 2 corners, plus the 4 corner tiles.

$$2(l - 2) + 2(w - 2) + 4$$

This is expression IV.

The other two expressions, I and II, do not correctly represent the total number of tiles in the border.

Also, when substituting *l* = 10 and *w* = 6 into each expression, the expressions that equal 28 correctly represent the total number of tiles in the border.

I. $2(10) + 2(6) = 32$

II. $2(10) + 2(6) + 4 = 36$
III. $2(10) + 2(6) - 4 = 28$
IV. $2(10 - 2) + 2(6 - 2) + 4 = 28$

Therefore, the expressions that represent the total number of tiles in the border are **III and IV only**.

6. In this case, $2t + t$ is taking a number and adding 2 times that number to it, which is the same as 3 times that number.

So, **the number of toys that Josh and Tony have when Tony has 2 times the number of toys as Josh** is the correct answer.

7. The number of members in the health club last year is represented by H. A 15% decrease in the number of members in the health club can be represented by $(0.15)H$.

Since the number of members in the health club has decreased from H by $0.15H$, the expression $H - 0.15H$ represents the number of members in the health club this year, which is T. This is modeled by the given equation.

$$H - 0.15H = T$$

The equation is simplified as shown below.

$$H - 0.15H = T$$

$$0.85H = T$$

So, the number of members in the club this year can be expressed as 85% of H.

Therefore, the correct interpretation for the given expression would be ***H* is 85% of the number of members last year.**

8. The original price of the handbag is represented by M. The 31% discount on the original price of the handbag can be represented by $(0.31)M$.

Since the cost of the handbag has decreased from M by $0.31M$, the expression $M - 0.31M$ represents the cost of the handbag after applying the discount, which is D. This is modeled by the given equation.

$$M - 0.31M = D$$

The equation is simplified as shown below.

$$M - 0.31M = D$$

$$0.69M = D$$

So, the cost of the handbag after applying the discount can be expressed as 69% of M.

Therefore, the correct interpretation for the given expression would be ***D* is 69% of the original price of the handbag.**

9. In this case, 40%(*b* + $15.00) is multiplying the sum of a number and $15.00 by 40%, which is the same as $6.00 more than 40% times *b*.

So, **Summer paid $6.00 more than 40% of *b*** is the correct answer.

10. Since the initial cost, *p*, is multiplied by a number less than 1, the cost of the cell phone model decreased from last year to today. Find the percent of decrease by subtracting 0.93 from 1.

$$1 - 0.93 = 0.07$$

Since 0.07 is equivalent to 7%, **the cost of the cell phone model decreased by 7%.7%.**

The given expression can be rewritten as the difference of the initial cost, *p*, and the amount by which the cost decreased, 0.07*p*.

$$0.93p = p - 0.07p$$

So, **an equivalent expression that represents this situation is *p* -0.07*p*..**

Grade 7 Math: Symbolize & Solve Equations

1. A math teacher gives her class the following problem.

Barry is selling magazine subscriptions for a school fundraiser. He has already sold 15 subscriptions. He plans to sell 3 subscriptions per week until he reaches a total of 30 subscriptions sold. How many weeks will it take Barry to achieve his goal.

One student in the class solves the problem arithmetically as shown below.

$$30 \text{ subscriptions} - 15 \text{ subscriptions} = 15 \text{ subscriptions}$$

and

$$\begin{aligned}
\text{Week } 1: &\quad 15 \text{ subscriptions} - 3 \text{ subscriptions} = 12 \text{ subscriptions} \\
\text{Week } 2: &\quad 12 \text{ subscriptions} - 3 \text{ subscriptions} = 9 \text{ subscriptions} \\
\text{Week } 3: &\quad 9 \text{ subscriptions} - 3 \text{ subscriptions} = 6 \text{ subscriptions} \\
\text{Week } 4: &\quad 6 \text{ subscriptions} - 3 \text{ subscriptions} = 3 \text{ subscriptions} \\
\text{Week } 5: &\quad 3 \text{ subscriptions} - 3 \text{ subscriptions} = 0 \text{ subscription}
\end{aligned}$$

So, Barry will achieve his goal in $\boxed{5 \text{ weeks}}$.

Which algebraic equation could be used to find the same solution?

- ○ **A.** 15 + 3*x* = 30
- ○ **B.** 3 + 15*x* = 30
- ○ **C.** 3*x* - 15 = 30
- ○ **D.** 15*x* - 3 = 30

---

2. A trampoline park costs $12 for the first hour and $6 for each additional hour. Flynn pays $30 at the trampoline park.

Select the equation that represents the given situation and find the number of additional hours Flynn stays at the trampoline park after the first hour.

- ○ **A.** 12*x* + 6 = 30; 2 hours
- ○ **B.** 6*x* + 12 = 30; 3 hours
- ○ **C.** 12*x* + 6 = 30; 3 hours
- ○ **D.** 6*x* + 12 = 30; 2 hours

3. Tim's phone service charges $25.82 plus an additional $0.20 for each text message sent per month. If Tim's phone bill was $30.82, which equation could be used to find how many text messages, *x*, Tim sent last month?

- **A.** $0.20*x* - $25.82 = $30.82
- **B.** $0.20*x* + $25.82 = $30.82
- **C.** $25.82*x* - $0.20 = $30.82
- **D.** $25.82*x* + $0.20 = $30.82

---

4. Ryan is performing an experiment. He starts with a solution that has a temperature of 12.2°C. He lowers the temperature 5 times by the same amount each time. He stopped the experiment when the temperature of the solution was was -14.61°C.

Which equation can be used to find x, the number of degrees he lowered the temperature by each time?

- **A.** -5*x* – 12.2 = -14.61
- **B.** -5*x* + *12.2* = -14.61
- **C.** 5*x* - 12.2 = -14.61
- **D.** 5*x* + *12.2* = -14.61

5. Ruth has 12 rolls at her bakery. She receives an online order for 60 rolls. Ruth bakes rolls in batches of 24.

Select the equation that represents the given situation and find the number of batches Ruth needs to make to complete the order.

- **A.** $24x + 12 = 60$; 3 batches
- **B.** $12x + 24 = 60$; 2 batches
- **C.** $24x + 12 = 60$; 2 batches
- **D.** $12x + 24 = 60$; 3 batches

---

6. Mary spent a total of $291.63 for a party. She spent $200.67 on food, plus an additional $30.32 for each hour of the party. How long was the party?

- **A.** 3 hours
- **B.** 5 hours
- **C.** 4 hours
- **D.** 2 hours

---

7. An oil drilling company drills the same distance each day for 5 days. They started at an elevation of 121.175 feet and ended at an elevation of -246.875 feet.

Which equation can be used to find *x*, the distance they drilled each day?

- **A.** $-5x + 121.175 = -246.875$
- **B.** $5x - 121.175 = -246.875$
- **C.** $-5x - 121.175 = -246.875$
- **D.** $5x + 121.175 = -246.875$

---

8. Tim and Tom are trying to earn money to buy a new game system over a 3-month period. Tim saved $45.88 each month. If they need a total of $213.33 to buy the game system, how much does Tom need to earn each of the 3 months in order to buy the game system?

- **A.** $137.64
- **B.** $25.23
- **C.** $167.45
- **D.** $75.69

9. Last year, the school library had a total of x books. Over the summer, the library acquired another 39 books and now has a total of 2,580 books. Which equation could be used to find x, the number of books the library had last year?

- **A.** $2{,}580 + x = 39$
- **B.** $39x = 2{,}580$
- **C.** $x + 39 = 2{,}580$
- **D.** $x - 39 = 2{,}580$

---

10. Last month, Marcus borrowed $93 from his roommate. So far, he has paid him back $27. Which equation could be used to find x, the amount of money he still owes his roommate?

- **A.** $\$93 + x = \$27$
- **B.** $\$27x = \$93$
- **C.** $x - \$27 = \$93$
- **D.** $x + \$27 = \$93$

Answers: Symbolize & Solve Equations

1. A
2. B
3. B
4. B
5. C
6. A
7. A
8. B
9. C
10. D

Explanations

1. To find the algebraic equation that could be used to get the same solution, first assign a variable to the unknown quantity in the situation.

Let *x* represent the number of weeks Barry takes to achieve his goal. He has already sold 15 subscriptions, and every week he plans to sell 3 subscriptions. The expression that represents the number of subscriptions Barry sells is shown below.

$$15 + 3x$$

He wants to sell a total of 30 subscriptions. So, the following equation can be written by setting the expression for the number of subscriptions sold equal to his goal.

$$15 + 3x = 30$$

To find the number of weeks it will take to reach his goal, solve the equation by isolating *x*.

$$\begin{aligned} 15 + 3x &= 30 \\ 3x &= 30 - 15 \\ 3x &= 15 \\ x &= \frac{15}{3} \\ x &= 5 \text{ weeks} \end{aligned}$$

So, Barry will achieve his goal in 5 weeks.

The solution obtained by solving the problem algebraically is the same as the solution obtained by solving the problem arithmetically.

So, the algebraic equation that could be used to find the same solution is **15 + 3*x* = 30**.

2. First, set up an equation in the form of *px* + *q* = *r*, where *p* is the additional cost per hour, *x* is the number of additional hours, *q* is the cost of the first hour, and *r* is the total amount paid. Then, solve for *x*.

The trampoline park costs $12 for the first hour and $6 for each additional hour.

$$6x + 12$$

Flynn paid $30 at the trampoline park.

$$6x + 12 = 30$$

So, the equation **6*x* + 12 = 30** represents the given situation.

Now, solve the equation and find the number of hours Flynn stays at the trampoline park after the first hour.

$$6x + 12 = 30$$
$$6x + 12 - 12 = 30 - 12$$
$$6x = 18$$
$$x = 3$$

So, Flynn stays at the trampoline park for **3** additional hours after the first hour.

3. The situation can be modeled by a linear equation of the form *px* + *q* = *r*, where *p* is the cost per text message sent, *q* is the monthly charge, and *r* is the monthly total of Tim's phone bill.

$0.20x + $25.82 = $30.82

4. The situation can be modeled by a linear equation of the form px + q = r, where p is the number of times the temperature of the solution was lowered, q is the temperature of the solution at the beginning of the experiment, and r is the temperature of the solution at the end of the experiment.

The equation to find the number of degrees, x, Ryan lowered the temperature by each time can be written as shown.

$$12.2 + (-5x) = -14.61$$
$$-5x + 12.2 = -14.61$$

$30.32x$ $200.67

$30.32x$

5. First, set up an equation in the form of $px + q = r$, where p is the number of rolls baked per batch, x is the number of batches, q is the number of rolls already made, and r is the number of rolls needed to complete the order. Then, solve for x.

Ruth has 12 rolls at her bakery. She then baked 24 rolls per batch to complete the order.

$$24x + 12$$

She has to make a total of 60 rolls to complete the order.

$$24x + 12 = 60$$

So, the equation **$24x + 12 = 60$** represents the given situation.

Now, solve the equation and find the number of batches Ruth made to complete the order.

$$\begin{aligned} 24x + 12 &= 60 \\ 24x + 12 - 12 &= 60 - 12 \\ 24x &= 48 \\ x &= 2 \end{aligned}$$

So, Ruth made **2 batches** to complete the order.

6. The situation can be modeled by a linear equation of the form $px + q = r$, where p is the cost per hour, q is the amount charged for food, and r is the total charged.

Set up an equation and solve.

$$\begin{aligned} px + q &= r \\ \$30.32x + \$200.67 &= \$291.63 \\ \$30.32x &= \$291.63 - \$200.67 \\ \$30.32x &= \$90.96 \\ x &= 3 \end{aligned}$$

Therefore, the party lasted **3 hours.**

7. The situation can be modeled by a linear equation of the form $px + q = r$, where p is the number of days the company drilled the same distance, q is the elevation before the drilling began, and r is the elevation after the drilling ended.

The equation to find x, the distance the company drilled each day, can be written as shown.

$$121.175 + (-5x) = -246.875$$
$$-5x + 121.175 = -246.875$$

8. The situation can be modeled by a linear equation of the form $p(x + q) = r$, where p is the number of months, x is Tom's earnings per month, q is Tim's earnings per month, and r is the amount needed to buy the game system.

Set up an equation and solve.

$$p(x + q) = r$$
$$3(x + \$45.88) = \$213.33$$
$$3x + \$137.64 = \$213.33$$
$$3x = \$75.69$$
$$x = \$25.23$$

Therefore, Tom needs to earn **$25.23** each month in order to buy the new game

system. 9. Translate the given information into an equation.

number of books last year + acquired books = total number of books

x + 39 = 2,580

The equation ***x* + 39 = 2,580** could be used to find x, the number of books the library had last year.

10. Translate the given information into an equation.

amount borrowed - amount paid back = amount still owed

$93 - $27 = x

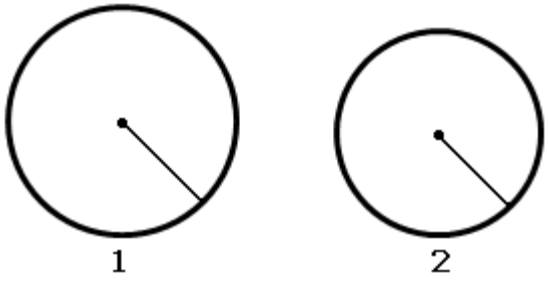
Since this equation is not an answer choice, try rewriting the equation.

$$\$93 - \$27 = x$$
$$\$93 = x + \$27$$
$$x + \$27 = \$93$$

The equation ***x* + $27 = $93** could be used to find *x*, the amount of money he still owes his roommate.

Grade 7 Math: Area & Circumference of Circles

1.



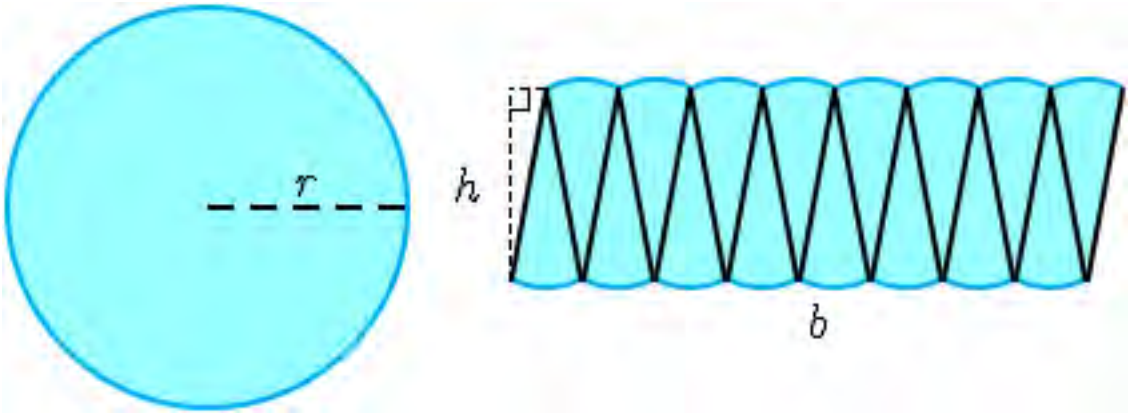
Note: Images are not drawn to scale.

The circumference of circle 1 is 16π units. The circumference of circle 2 is 6π units.

Which of the following is true about the area of the circles?

- **A.** Not enough information is given to make a comparison between the areas of the circles.
- **B.** The area of circle 1 is less than the area of circle 2.
- **C.** The area of circle 1 equals the area of circle 2.
- **D.** The area of circle 1 is greater than the area of circle 2.

2. A circle can be cut into smaller and smaller slices and rearranged in the shape of a parallelogram as shown.



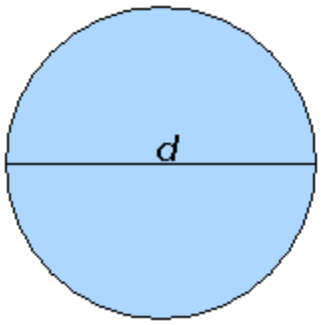
The formula for finding the area, *A*, of a parallelogram with base *b* and height *h* is shown.

$$A = b \times h$$

Which equation represents the circumference of a circle in terms of its area?

- **A.** $C = \frac{2A}{r}$
- **B.** $C = \frac{A}{2r}$
- **C.** $C = \frac{2A}{r^2}$
- **D.** $C = \frac{4A}{r}$

3.



The diameter of the circle above is 10 cm. What is the circumference of the circle? *(Use $\pi = 3.14$.)*

- **A.** 15.7 cm
- **B.** 157 cm
- **C.** 78.5 cm
- **D.** 31.4 cm

4.

Charlie measured the circle-shaped part of a sun his sister drew on the chalkboard.

The circumference of the circle is 94.2 cm. What is the diameter? (*Use 3.14 for* π.)

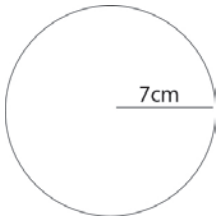
- **A.** 112.5 cm
- **B.** 30 cm
- **C.** 7.5 cm
- **D.** 15 cm

---

5. A clock has a circumference of 43.96 inches. What is the area of the clock? (Use 3.14 for π.)

- **A.** 87.92 square inches
- **B.** 153.86 square inches
- **C.** 21.98 square inches
- **D.** 307.72 square inches

6



7cm

Note: picture not drawn to scale

The circle above has a radius of 7 cm. What is the area of the circle? (Use = 3.14 for π .)

- **A.** 43.96 cm^2
- **B.** 21.98 cm^2
- **C.** 307.72 cm^2
- **D.** 153.86 cm^2

7. Brandon drew 4 circles, each with a different diameter, on a piece of paper. For each circle, he laid a piece of string along the outline and then measured the length of the string. His results are shown in the table below.

Circle Measurements

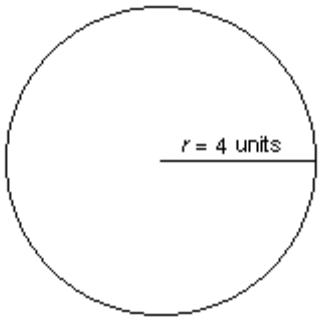
Diameter	Length of String
5 cm	15.7 cm
10 cm	31.4 cm
15 cm	47.1 cm
20 cm	62.8 cm

Brandon wrote the equation, $y = kx$, to model the relationship between the circumference and the diameter of the circle. Which of the following statements correctly describe what k represents in this equation?

I. k represents the radius
II. k represents the unit rate
III. k represents the area
IV. k represents π

- **A.** II and IV only
- **B.** I, II, and IV only
- **C.** I and IV only
- **D.** I and III only

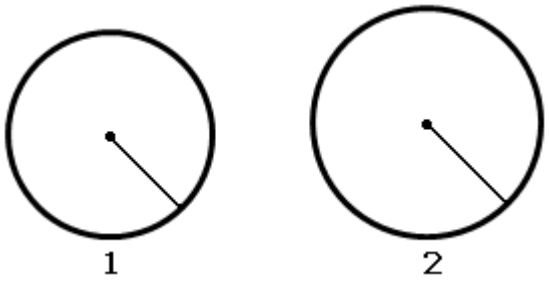
8.



For the given circle, which of the following is true regarding its circumference and area?

- **A.** The area is larger, and it is four times the circumference.
- **B.** The circumference is larger, and it is two times the area.
- **C.** The area is larger, and it is two times the circumference.
- **D.** The circumference is larger, and it is four times the area.

9



Note: Images are not drawn to scale.

The area of circle 1 is 6π square units. The area of circle 2 is 7π square units.

Which of the following is true about the circumferences of the circles?

- **A.** Not enough information is given to make a comparison between the circumferences of the circles.
- **B.** The circumference of circle 1 equals the circumference of circle 2.
- **C.** The circumference of circle 1 is greater than the circumference of circle 2.
- **D.** The circumference of circle 1 is less than the circumference of circle 2.

10.

Sabrina rode on a Ferris wheel at the state fair. The radius of the Ferris wheel was 105 feet.

What is the approximate distance Sabrina traveled in one revolution of the Ferris wheel? (Use 3.14 for π.)

- **A.** 329.7 ft
- **B.** 1,318.8 ft
- **C.** 34,618.5 ft
- **D.** 659.4 ft

Answers: Area & Circumference of Circles

1. D
2. A
3. D
4. B
5. B
6. D
7. A
8. C
9. D
10. D

Explanations

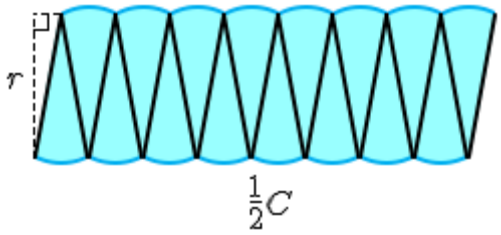
1. When two circles with different circumferences are compared, the circle with the greater circumference has a greater area.

Since the circumference of circle 1 is greater than the circumference of circle 2, **the area of circle 1 is greater than the area of circle 2..**

2. As a circle is cut into smaller and smaller slices, it increasingly takes the shape of a parallelogram.

The height of the parallelogram is equal to the radius of the circle, *r*.

Combined, the base and top side of the parallelogram are equal to the circumference of the circle. So, the length of the base will be half the circumference, *C*, of the circle.



The formula for finding the area of a parallelogram is shown.

$$A = b \times h$$

In the formula for the area of a parallelogram, substitute *r* for *h* and = $\frac{1}{2}C$ for *b*.

$$A = b \times h$$
$$A = \left(\frac{1}{2}C\right) \times r$$
$$2A = rC$$
$$C = \frac{2A}{r}$$

So, the equation that represents the circumference of a circle in terms of its area is shown.

$$C = \frac{2A}{r}$$

3. First, find the radius of the circle.

$$r = d \div 2$$
$$= 10 \text{ cm} \div 2$$
$$= 5 \text{ cm}$$

Then, use the circumference formula to find the circumference of the circle.

$$C = 2\pi r$$
$$= 2(3.14)(5 \text{ cm})$$
$$= 31.4 \text{ cm}$$

4. Use the circumference to find the diameter, *d*.

$$C = 2\pi r$$
$$C = \pi d$$
$$94.2 \text{ cm} = 3.14d$$
$$\frac{94.2 \text{ cm}}{3.14} = d$$
$$30 \text{ cm} = d$$

Therefore, the diameter of the circle is **30 cm**.

5. Given the circumference of the clock, find the radius.

$$C = 2\pi r$$
$$43.96 \text{ in} = 2(3.14)(r)$$
$$43.96 \text{ in} = 6.28r$$
$$43.96 \text{ in} \div 6.28 = 6.28r \div 6.28$$
$$7 \text{ in} = r$$

Next, use the radius of the clock to find the area.

$$\begin{aligned} A &= \pi r^2 \\ &= 3.14(7 \text{ in})^2 \\ &= 3.14(49 \text{ in}^2) \\ &= 153.86 \text{ in}^2 \end{aligned}$$

6. Use the formula for area.

$$\begin{aligned} \text{area} &= \pi r^2 \\ &= 3.14(7 \text{ cm})^2 \\ &= 3.14(49 \text{ cm}^2) \\ &= 153.86 \text{ cm}^2 \end{aligned}$$

7. The circumference of the circle is represented by the length of string measured around it.

The equation modeled by Brandon to show the relation between the circumference and the diameter is as shown below.

$$y = kx$$

Let *y* represent the circumference and *x* represent the diameter. To find what k represents, solve for k in the equation above.

$$k = \frac{y}{x}$$

Use the data from the table to find what k represents.

Circle Measurements

Diameter, *x*	**Length of String,, *y***	$k = \frac{y}{x}$
5 cm	15.7 cm	$k = \frac{15.7}{5}$

10 cm	31.4 cm	$k = \frac{31.4}{10}$
15 cm	47.1 cm	$k = \frac{47.1}{15}$
20 cm	62.8 cm	$k = \frac{62.8}{20}$

The table shows that k is equal to 3.14 for each row. Since 3.14 is an approximation for π and π is a constant, k represents the constant of proportionality.

It also represents the unit rate because it is used to compare the circumference of the circle to its diameter.

So, the statements that correctly describe what k represents in this equation are **II and IV only**.

8. The area of a circle is given by the following formula.

$$\text{Area} = \pi r^2$$

For the given circle *r* = 4. Substitute the value of *r* to calculate the area.

$$\begin{aligned}\text{Area} &= \pi \times 4^2 \\ &= 16\pi \text{ square units}\end{aligned}$$

The circumference of a circle is given by the following formula.

$$\text{Circumference} = 2\pi r$$

Substitute the value of *r* to calculate the circumference.

$$\begin{aligned}\text{Circumference} &= 2 \times \pi \times 4 \\ &= 8\pi \text{ units}\end{aligned}$$

It can be seen that the area is larger than the circumference.
The relation between the area and the circumference can be shown as follows.

$$\begin{aligned}\frac{\text{Area}}{\text{Circumference}} &= \frac{16\pi}{8\pi} \\ &= 2\end{aligned}$$

The ratio of the area to the circumference is 2.
Therefore, **the area is larger, and it is two times the circumference**.

9. When two circles with different areas are compared, the circle with the lesser area has a lesser circumference.

Since the area of circle 1 is less than the area of circle 2, **the circumference of circle 1 is less than the circumference of circle 2.**

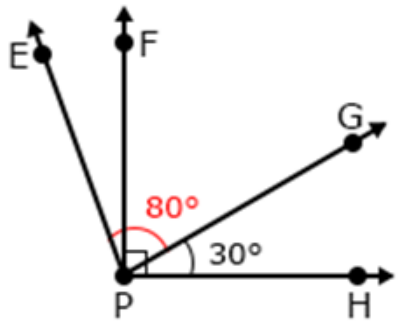
10. The distance Sabrina traveled in one revolution of the Ferris wheel is equal to the circumference.

The approximate circumference of the Ferris wheel can be found using the following formula.

$$\begin{aligned} C &= 2\pi r \\ &\approx 2(3.14)(105\ \text{ft}) \\ &= 659.4\ \text{ft} \end{aligned}$$

Grade 7 Math: Angle Relationships

1.

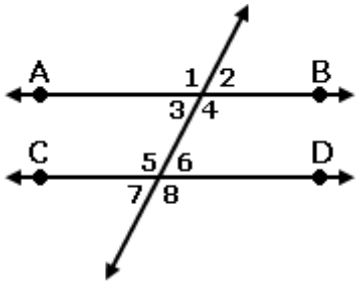


Given: m∠EPG = 80°; m∠GPH = 30°

If ∠FPG and ∠GPH are complementary angles, then what is the measure of ∠FPG?

- **A.** 40°
- **B.** 30°
- **C.** 50°
- **D.** 60°

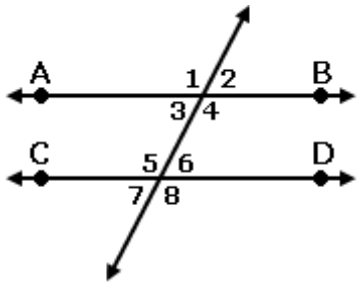
2.



Lines AB and CD are parallel. If∠6 measures (4x - 32)°, and∠ 5 measures 132°, what is the value of x?

- **A.** $x = 20$
- **B.** $x = 10$
- **C.** $x = 132$
- **D.** $x = 228$

3



Lines AB and CD are parallel. If∠1 measures (3*x* + 13)°, and∠ 4 measures 151°, what is the value of *x*?

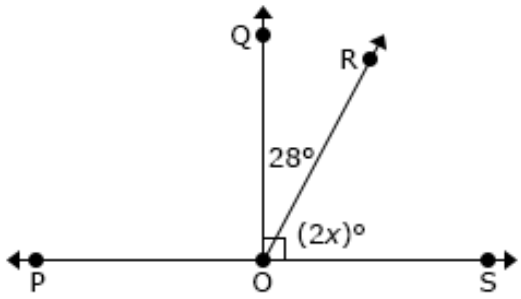
- **A.** *x* = -4
- **B.** *x* = 74
- **C.** *x* = 46
- **D.** *x* = 5

---

4. Angle DOE and angle EOF are adjacent angles. If m∠DOF = 66°, m∠DOE = *x*, and m∠EOF = 27°, which equation could be used to solve for *x*?

- **A.** *x* - 66° + 27° = 90°
- **B.** *x* - 27° = 66°
- **C.** *x* + 27° = 66°
- **D.** *x* + 66° + 27° = 180°

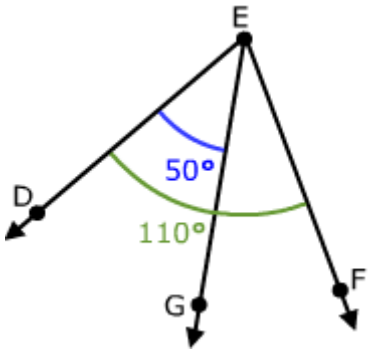
5.



If ∠ROQ and ∠ROS are complementary angles, then what is the value of *x* and m∠ROS?

- **A.** *x* = 60; m∠ROS = 28°
- **B.** *x* = 62; m∠ROS = 31°
- **C.** *x* = 28; m∠ROS = 60°
- **D.** *x* = 31; m∠ROS = 62°

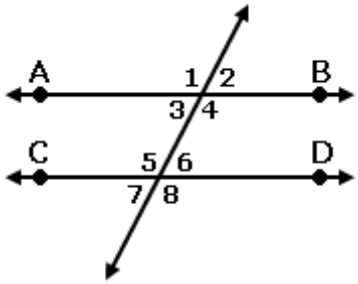
6.



What is the measure of ∠GEF?

- **A.** 60°
- **B.** 110°
- **C.** 160°
- **D.** 50°

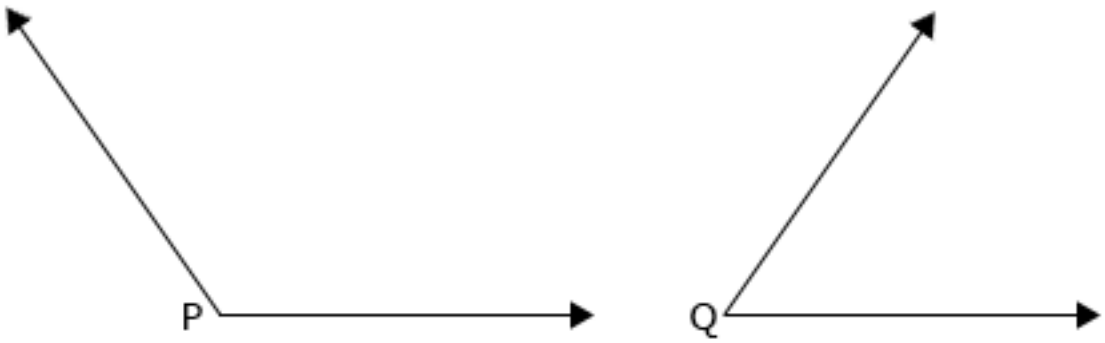
7.



Lines AB and CD are parallel. If ∠1 measures $(2x + 15)°$, and ∠4 measures 111°, what is the value of x?

- **A.** $x = 27$
- **B.** $x = 132$
- **C.** $x = -4$
- **D.** $x = 48$

8.

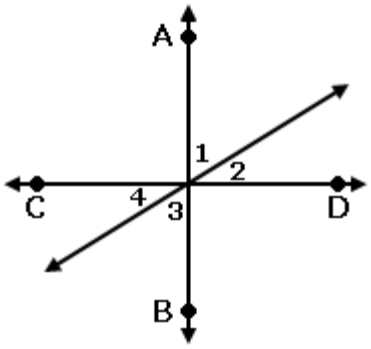


Note: Figure not drawn to scale.

In the above figure, m∠P = 125° and m∠Q = 5*x*. If angles P and Q are supplementary angles, what is the value of *x* and the measure of angle Q?

- **A.** *x* = 61, m∠Q = 55°
- **B.** *x* = 11, m∠Q = 16°
- **C.** *x* = 11, m∠Q = 55°
- **D.** *x* = 43, m∠Q = 215°

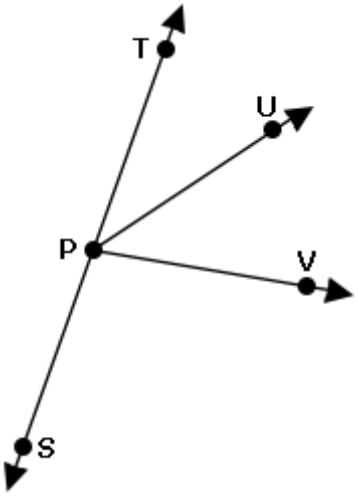
9



Lines AB and CD are perpendicular to each other. If ∠1 measures (4*x* + 3)°, and ∠2 measures 19°, what is the value of *x*?

- **A.** *x* = 71
- **B.** *x* = 17
- **C.** *x* = 109
- **D.** *x* = 6

10.



Note: Figure not drawn to scale.

In this picture, m∠TPU = 36° and m∠UPS = 5x + 10. If ∠TPU and ∠UPS are supplementary angles, then what is the value of x?

- **A.** 8.8
- **B.** 134
- **C.** 26.8
- **D.** 30.8

Answers: Angle Relationships

1. D
2. A
3. C
4. C
5. D
6. A
7. D
8. C
9. B
10. C

Explanations

1. It is given that angle FPG and angle GPH are complementary. Therefore, the following equation can be written.

$$\mathrm{m}\measuredangle \mathrm{FPG} + \mathrm{m}\measuredangle \mathrm{GPH} = 90^\circ$$

Now, substitute the given measure for m∠GPH, and solve for m∠FPG.

$$\begin{aligned} \mathrm{m}\measuredangle \mathrm{FPG} + 30^\circ &= 90^\circ \\ \mathrm{m}\measuredangle \mathrm{FPG} &= 90^\circ - 30^\circ \\ \mathrm{m}\measuredangle \mathrm{FPG} &= 60^\circ \end{aligned}$$

Therefore, the measure of ∠FPG is **60°**.

2. In this picture, ∠6 and ∠5 are supplementary angles.

When two lines intersect, the measures of adjacent angles sum to 180°.

$$\begin{aligned} \mathrm{m}\measuredangle 6 + \mathrm{m}\measuredangle 5 &= 180 \\ 4x - 32 + 132 &= 180 \\ 4x - 32 &= 48 \\ 4x &= 48 + 32 \\ 4x &= 80 \\ x &= 20 \end{aligned}$$

3. In this picture, $\angle 1$ and $\angle$ 4 are vertical angles.

When two lines intersect, vertical angles are congruent so their angle measures are equal.

$$\begin{aligned} m\measuredangle 1 &= m\measuredangle 4 \\ 3x + 13 &= 151 \\ 3x &= 151 - 13 \\ 3x &= 138 \\ x &= 46 \end{aligned}$$

4. In the figure ∠DOE and ∠EOF are adjacent angles. So, the following equation can be written.

$$m\measuredangle DOE + m\measuredangle EOF = m\measuredangle DOF$$

It is given that m∠DOE = *x*, m∠EOF = 27°, and m∠DOF = 66°. So, the following equation can be written.

$$x + 27^\circ = 66^\circ$$

Therefore, the equation ***x* + 27°°= 66°** could be used to solve for *x*.

5. Given that ∠ROQ and ∠ROS are complementary. Angles are complementary if the sum of their measures is 90°.

$$m\measuredangle ROQ + m\measuredangle ROS = 90^\circ$$

Now, substitute m∠ROQ = 28° and m∠ROS = (2*x*)° and solve for *x*.

$$\begin{aligned} 28^\circ + (2x)^\circ &= 90^\circ \\ (2x)^\circ &= 90^\circ - 28^\circ \\ (2x)^\circ &= 62^\circ \\ x &= \frac{62}{2} \\ x &= 31 \end{aligned}$$

Substitute *x* = 31 to calculate the m∠ROS.

$$m\measuredangle ROS = (2x)^\circ = (2 \cdot 31)^\circ = 62^\circ$$

Therefore, ***x* = 31;; m∠ROS = 62°** .

6. In the picture, ∠DEG and ∠GEF are adjacent angles. The following equation can be written.

$$m\measuredangle DEG + m\measuredangle GEF = m\measuredangle DEF$$

It is given that m∠DEF = 110° and m∠DEG = 50°

Now, solve for m∠GEF.

$$\begin{aligned} m\measuredangle DEG + m\measuredangle GEF &= m\measuredangle DEF \\ 50^\circ + m\measuredangle GEF &= 100^\circ \\ m\measuredangle GEF &= 110^\circ - 50^\circ \\ m\measuredangle GEF &= 60^\circ \end{aligned}$$

So, the measure of ∠GEF is **60°.**

7. In this picture, ∠1 and ∠4 are vertical angles.

When two lines intersect, vertical angles are congruent so their angle measures are equal.

$$\begin{aligned} m\measuredangle 1 &= m\measuredangle 4 \\ 2x + 15 &= 111 \\ 2x &= 111 - 15 \\ 2x &= 96 \\ x &= 48 \end{aligned}$$

8. It is given that ∠P and ∠Q are supplementary, which means their measurements have a sum of 180°.

$$\begin{aligned} m\measuredangle P + m\measuredangle Q &= 180^\circ \\ 125 + 5x &= 180 \\ 5x &= 180 - 125 \\ 5x &= 55 \\ x &= 11 \end{aligned}$$

To find the measurement of angle Q, substitute the value of *x* in the given equation for angle Q and simplify.

$$\begin{aligned} m\measuredangle Q &= (5x)^\circ \\ &= (5(11))^\circ \\ &= 55^\circ \end{aligned}$$

So, ***x* =11** and **m∠Q=;55°**.

9. In this picture, ∠1 and ∠2 are complementary angles.

Complementary angles add up to 90°.

$$\begin{aligned} m\measuredangle 1 + m\measuredangle 2 &= 90 \\ (4x + 3) + 19 &= 90 \\ 4x &= 90 - 19 - 3 \\ 4x &= 68 \\ x &= 17 \end{aligned}$$

10. It is given that ∠TPU and ∠UPS are supplementary angles.

Supplementary angles add up to 180°. Therefore, the following equation can be written.

$$\begin{aligned} m\measuredangle \mathrm{TPU} + m\measuredangle \mathrm{UPS} &= 180^{\circ} \\ 36 + (5x + 10) &= 180 \\ 46 + 5x &= 180 \\ 5x &= 180 - 46 \\ 5x &= 134 \\ x &= 26.8 \end{aligned}$$

Therefore, the value of *x* is **26.8**.

Grade 7 Math: Probability & Relative Frequency

1. Jason performed an experiment in which he randomly drew one chocolate at a time from a box, with replacement. The box contained one chocolate each of plain, milk, caramel, mint, and hazelnut varieties. The results of his experiment are shown below.

Chocolate variety TTimes Drawn	
plain	6
milk	7
caramel	9
mint	3
hazelnut	17

Based on the experiment above, predict the number of times a caramel chocolate would be drawn if he performs the experiment a total of 126 times.

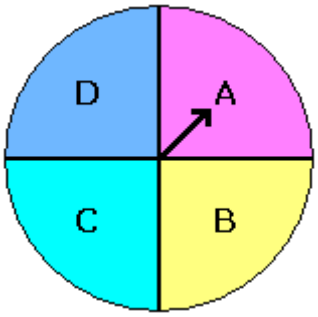
- **A.** 18
- **B.** 21
- **C.** 24
- **D.** 27

2

A bag contains an equal number of blue, green, pink, and red balls. If a ball is chosen at random 120 times, with replacement, predict the number of times the ball would be the color blue.

- **A.** The color blue would be of chosen roughly 30 times, but probably not exactly 30 times.
- **B.** The color blue would be chosen roughly 12 times, but probably not exactly 12 times.
- **C.** The color blue would be chosen exactly 30 times.
- **D.** The color blue would be chosen roughly 15 times.

3



If the spinner above is spun 160 times, predict the number of times the spinner would land on Section A.

- **A.** The spinner would land on Section A roughly 20 times.
- **B.** The spinner would land on Section A roughly 40 times, but probably not exactly 40 times.
- **C.** The spinner would land on Section A exactly 40 times.
- **D.** The spinner would land on Section A roughly 16 times, but probably not exactly 16 times.

---

4. Fred has a spinner that is split into four equal sections: red, blue, green, and yellow. Fred spun the spinner 504 times. Which of the following would be a good estimate of the number of times the spinner lands on the green section?

- **A.** 419
- **B.** 143
- **C.** 252
- **D.** 177

---

5. Merle has found that the probability of randomly drawing a bag of green tea out of a box of assorted tea bags is $\frac{3}{5}$. If Merle draws 25 tea bags out of the box, which of the following is the best prediction of the number of tea bags that will be green tea?

- **A.** 8
- **B.** 15
- **C.** 5
- **D.** 6

6. There are 11 pairs of red gloves, 21 pairs of black gloves, and 28 pairs of blue gloves in the sale bin at a discount store. If a sales clerk at the store randomly passes out pairs of gloves to 15 customers, which of the following is the best prediction of the number of customers who will receive blue gloves?

- **A.** 21
- **B.** 11
- **C.** 7
- **D.** 14

---

7. According to a survey, the probability of a household in a city choosing a sedan over other vehicle types is 38%. If 7,591 households in the city are looking to buy a new vehicle, approximately how many households would choose a sedan?

- **A.** 4,706
- **B.** 3,036
- **C.** 3,800
- **D.** 2,885

---

8. Belle is playing a game where the probability of drawing a card with a value greater than 12 is $\frac{1}{16}$. If she draws 64 cards throughout the game, which of the following is the best prediction of the number of cards she will draw with a value greater than 12?

- **A.** 5
- **B.** 3
- **C.** 12
- **D.** 4

9. Beth performed an experiment in which she randomly drew one napkin at a time from a drawer, with replacement. The drawer contained one napkin each of gray, cyan, beige, lilac, and crimson colors. The results of her experiment are shown below.

Napkin Color	TTimes Drawn
gray	5
cyan	14
beige	9
lilac	1
crimson	16

Based on the experiment above, predict the number of times a gray napkin would be drawn if she performs the experiment a total of 135 times.

- **A.** 16
- **B.** 15
- **C.** 14
- **D.** 13

---

10. Michael is drawing a card from a standard deck of 52 cards, which includes 4 aces: the ace of clubs, the ace of diamonds, the ace of hearts, and the ace of spades. For each trial, he draws a card, records which card he drew, and returns it to the deck. He draws an ace 240 times. Of the times he draws an ace, which of the following would be a good estimate for the number of times the ace drawn is the ace of hearts?

- **A.** 137
- **B.** 122
- **C.** 33
- **D.** 70

Answers: Probability & Relative Frequency

1. D
2. A
3. B
4. B
5. B
6. C
7. D
8. D
9. B
10. D

Explanations

1. In the experiment, Jason drew a caramel chocolate 9 times. The total number of times Jason performed the experiment is shown below.

$$6 + 7 + 9 + 3 + 17 = 42$$

Set up a proportion to predict the number of times a caramel chocolate would be drawn if the experiment is performed a total of 126 times.

$$\begin{aligned} \frac{9}{42} &= \frac{x}{126} \\ 9 \cdot 126 &= 42 \cdot x \\ 1{,}134 &= 42x \\ \frac{1{,}134}{42} &= x \\ 27 &= x \end{aligned}$$

Therefore, if Jason performs the experiment a total of 126 times, he could predict that a caramel chocolate would be drawn **27** times.

2. The bag contains equal number of blue, green, pink and red balls, so the probability of choosing the color blue is 1 time out of every 4 balls.

In order to predict the number of times the chosen ball would be the color blue when a ball is drawn 120 times, set up a proportion and solve.

$$\begin{aligned} \frac{1}{4} &= \frac{x}{120} \\ 4x &= 120 \\ x &= 30 \end{aligned}$$

However, since predicting a relative frequency is an estimate instead of an exact value, **the chosen ball would be the color blue roughly 30 times,,but probably not exactly 30 times**.

3. Notice that all four sections on the spinner are equal, so it has a probability of landing on Section A 1 time out of every 4 spins.

In order to predict the number of times the spinner would land on Section A if it was spun 160 times, set up a proportion and solve.

$$\frac{1}{4} = \frac{x}{160}$$
$$4x = 160$$
$$x = 40$$

However, since predicting a relative frequency is an estimate instead of an exact value, **the spinner would land on Section A roughly 40 times, but probably not exactly 40 times**.

4. Fred spun the spinner 504 times.

Each time the spinner was spun, the chance of it landing on green was $\frac{1}{4}$.
So, the spinner could have landed on green $\frac{1}{4}\times$ 504, or 126 times.
The answer that is closest to 126 would be the best estimate.

Therefore, **143** is the best estimate for the number of times the spinner landed on green.

5. Multiply the number of tea bags drawn by the probability to predict the number of bags that will be green tea.

$$25 \times \frac{3}{5} = 15$$

Therefore, the best prediction of the number of green tea bags that Merle will draw is **15**.

6. First, find the probability of a customer receiving a pair of blue gloves.

Twenty-eight of the 60 pairs of gloves are blue, so the probability of a customer receiving a blue pair of gloves is $\frac{28}{60} = \frac{7}{15}$.

Next, multiply the number of customers by the probability to predict the number of customers who will receive a pair of blue gloves.

$$15 \times \frac{7}{15} = 7$$

Therefore, the best prediction of the number of customers who will receive a pair of blue gloves is **7**.

7. The probability of a household in the city choosing a sedan over other vehicle types is 38%, or 0.38.

There are 7,591 households in the city that are looking to buy a new vehicle. To find approximately how many households would choose a sedan, multiply the number of households by the probability.

$$\begin{aligned}\text{Households Choosing Sedan} &= 0.38 \times 7{,}591 \\ &\approx 2{,}885\end{aligned}$$

So, approximately **2,885** households in the city would choose a sedan.

8. Multiply the number of cards Belle drew by the probability to predict the number of cards she will draw with a value greater than 12.

$$64 \times \frac{1}{16} = 4$$

Therefore, the best prediction of the number of cards Belle will draw with a value greater than 12 is **4**.

9. In the experiment, Beth drew a gray napkin 5 times. The total number of times Beth performed the experiment is shown below.

$$5 + 14 + 9 + 1 + 14 = 45$$

Set up a proportion to predict the number of times a gray napkin would be drawn if the experiment is performed a total of 135 times.

$$\begin{aligned}\frac{5}{45} &= \frac{x}{135} \\ 5 \cdot 135 &= 45 \cdot x \\ 675 &= 45x \\ \frac{675}{45} &= x \\ 15 &= x\end{aligned}$$

Therefore, if Beth performs the experiment a total of 135 times, she could predict that a gray napkin would be drawn **15** times.

10. Michael draws one of the four aces 240 times.

Each time an ace is drawn, the chance of it being an ace of hearts is $\frac{1}{4}$.

Since Michael draws an ace 240 times, he should get the ace of hearts about $\frac{1}{4}\times$ 240, or 60 times.

The answer that is closest to 60 would be the best estimate.

So, **700**would be a good estimate for the number of times the ace drawn is the ace of hearts.

Grade 7 Math: Sample Spaces of Compound Events

1. Julian went shopping for a new bicycle and gear. His options are listed below.

Type of Bike	Helmet Color	Hand Wear
Cruiser (C)	Black (B)	Full Gloves (F)
Mountain (M)	White (W)	Half Gloves (H)
Touring (T)	Gray (G)	

Which of the following lists all the possible outcomes?

C, B, F	M, W, F	T, G, F
C, B, H	M, W, H	T, G, H

W..

C, B, F	C, W, F	C, G, F
M, W, H	M, B, H	M, G, H
T, B, F	T, W, F	T, G, F

X..

C, B, F	C, M, T
W, M, H	W, B, G

Y.

C, B, F	M, B, F	T, B, F
C, B, H	M, B, H	T, B, H
C, W, F	M, W, F	T, W, F
C, W, H	M, W, H	T, W, H
C, G, F	M, G, F	T, G, F
C, G, H	M, G, H	T, G, H

Z.

- ○ **A.** X
- ○ **B.** Z
- ○ **C.** Y
- ○ **D.** W

2. Sarah selects eight cards from a pack of well shuffled cards. Five out of those eight cards are spades, two are clubs, and one is hearts.

Which list shows all the possible unique outcomes if Sarah chooses three cards randomly at one time? (Note: One outcome is shown per row in the tables.)

Card Outcomes

spades	spades	spades
spades	spades	hearts
spades	spades	clubs
clubs	clubs	spades
clubs	clubs	hearts
spades	hearts	clubs

W.

Card Outcomes

spades	spades	hearts
hearts	hearts	clubs
clubs	clubs	hearts
clubs	spades	hearts
spades	clubs	clubs

X..

Card Outcomes

spades	spades	clubs
spades	spades	hearts
spades	hearts	clubs

Y.

Card Outcomes

spades	spades	spades
spades	spades	hearts
spades	spades	clubs
spades	clubs	spades
spades	hearts	hearts
spades	hearts	clubs

Z.

- ○ **A.** X
- ○ **B.** W
- ○ **C.** Z
- ○ **D.** Y

2. New Park Pizza is offering a special to customers. They can pick the type of crust they would like and one topping from the chart below.

Crust	Topping
Thin	Pepperoni
Thick	Onions
Stuffed	Sausage
	Mushrooms
	Bacon

How many different pizza combinations of 1 crust and 1 topping can be made?

- **A.** 5
- **B.** 15
- **C.** 9
- **D.** 8

4. Kasey is ordering prints of some digital photos. She needs to decide the size, finish, and color for her prints. The photo options are shown below.

Size	Finish	Color
4 in × 6 in (1)	matte (M)	color (C)
5 in × 7 in (2)	glossy (G)	black and white (B)
8 in × 10 in (3)		
11 in × 14 in (4)		

Which of the following lists all the possible outcomes for choosing a size, finish, and color for the prints?

1, M, C	2, M, C	3, M, C	4, M, C
1, M, B	2, M, B	3, M, B	4, M, B
1, G, C	2, G, C	3, G, C	4, B, C
1, G, B	2, G, B	3, G, B	4, C, B

W..

1, M, C	2, M, C	3, M, C	4, M, C
1, M, B	2, M, B	3, M, B	4, M, B
1, G, C	2, G, C	3, G, C	4, G, C
1, G, B	2, G, B	3, G, B	4, G, B

X.

1, M, C	2, M, C	3, G, C	4, M, C
1, M, B	2, M, B	3, G, B	4, M, B
1, G, C	2, G, C	3, G, C	4, G, C
1, G, B	2, G, B	3, G, B	4, G, B

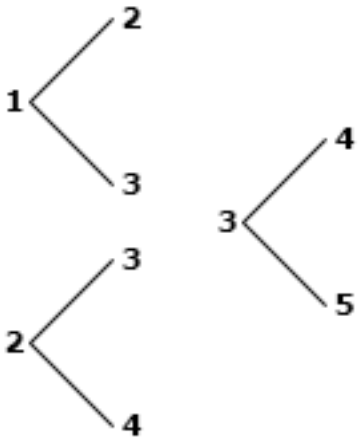
Y.

1, M, C	2, M, C	3, M, C	4, M, G
1, M, B	2, M, B	3, M, B	4, M, B
1, G, C	2, G, C	3, G, C	4, G, M
1, G, B	2, G, B	3, G, B	4, G, B

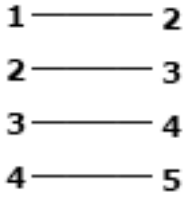
Z..

- **A.** W
- **B.** Y
- **C.** Z
- **D.** X

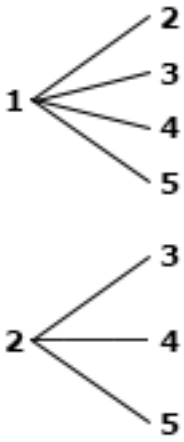
5. During a basketball season, there are 5 teams in a division. Each team will play every other team in the division once. Which diagram shows all of the possible games within a division?

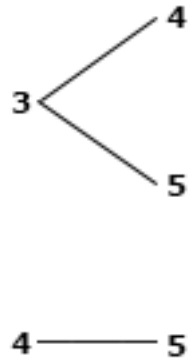


W..

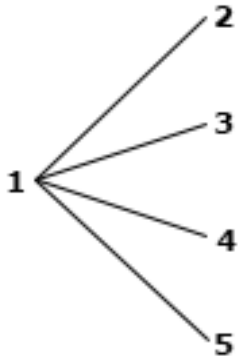


X..





Y.



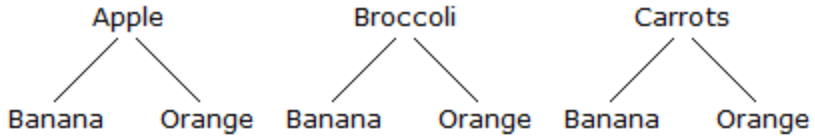
Z..

- **A.** X
- **B.** Z
- **C.** W
- **D.** Y

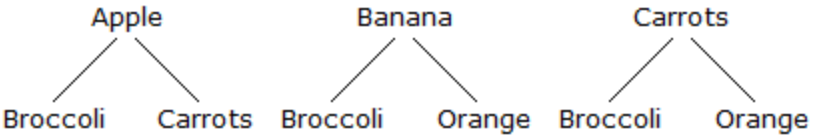
6. Beatrice is making her lunch and wants to include a piece of fruit and a vegetable. For fruits, she can choose an apple, a banana, or an orange. For vegetables, she can choose broccoli or carrots.

Which of the following diagrams shows the sample space if Beatrice chooses 1 piece of fruit and 1 vegetable?

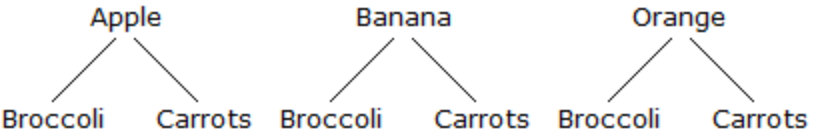
○ **A.**



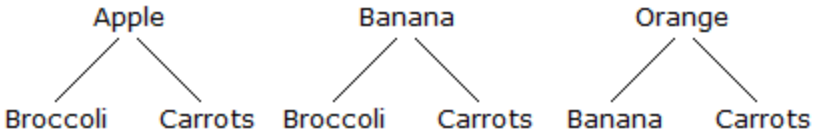
○ **B.**



○ **C.**

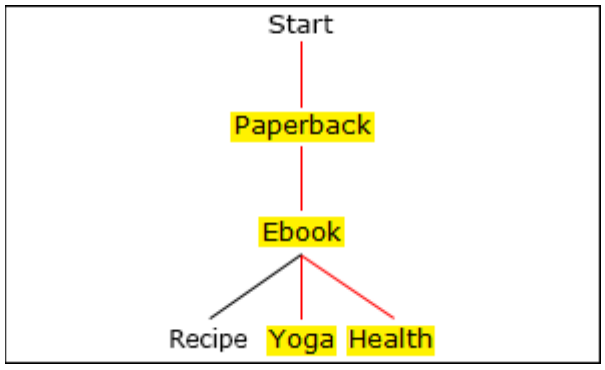


○ **D.**

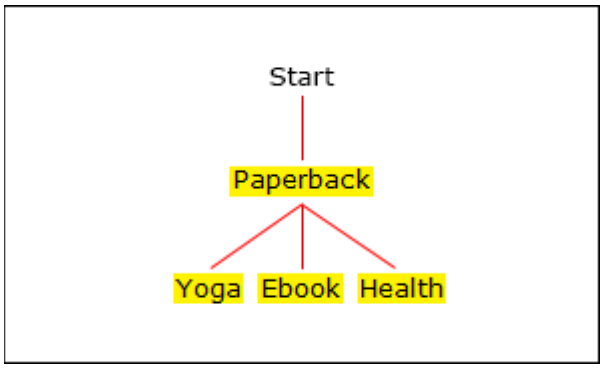


7. Sally visits an online self-improvement bookstore intending to buy two books, one each in two of the following categories: recipe books, yoga, and health. The store sells books in two formats, ebook and paperback.

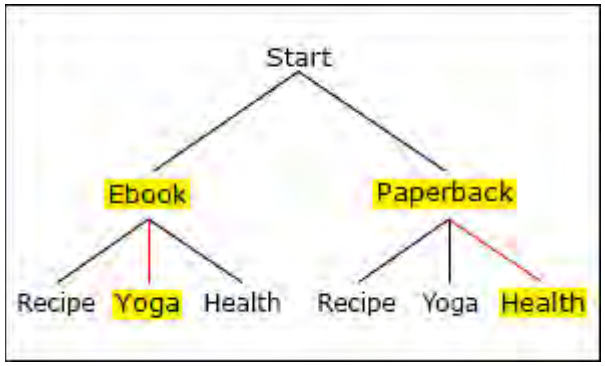
Which tree diagram shows the correct sample space, highlighting all the possible outcomes for Sally buying an ebook on yoga and ordering a paperback book on health?



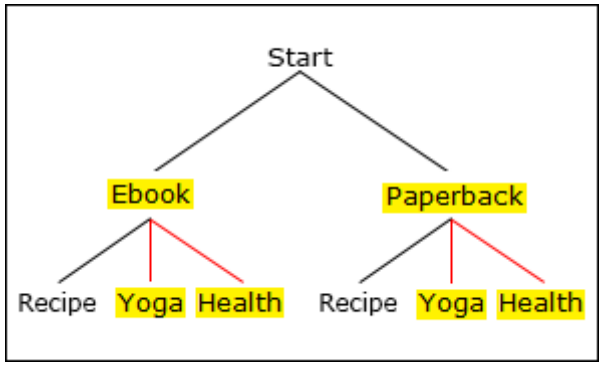
W..



X..



Y..



Z..

- **A.** Y
- **B.** Z
- **C.** X
- **D.** W

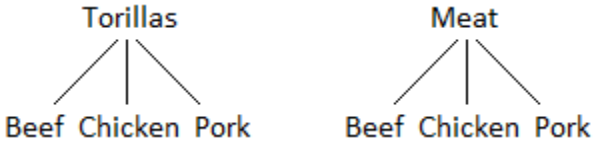
8. Tory owns a restaurant that sells soft tacos. The soft taco choices are shown in the table below.

Tory's Tacos

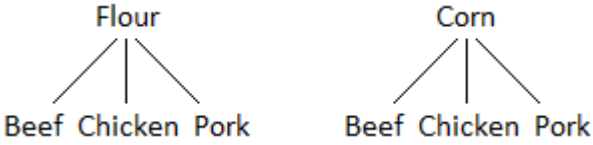
Tortillas	Meat
Corn	Beef
Flour	Chicken
	Pork

Which of the following diagrams shows all the possible outcomes if a customer chooses 1 type of tortilla and 1 type of meat for their tacos?

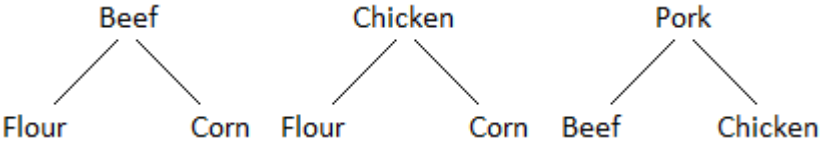
A.



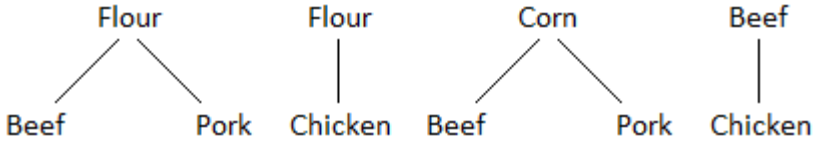
B.



C.



D.



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9. Mick is conducting an experiment where he flips a two-sided coin 4 times. How many different combinations of outcomes could the experiment have?

- **A.** 16
- **B.** 12
- **C.** 32
- **D.** 8

10. Aaron rolled two fair number cube, each labeled 1 through 6.

Which of the following is the list of all the possible outcomes where the sum of the two number cube is 7?

1, 6	3, 4	1,5
2, 5	4, 5	6, 1

W..

1, 6	3, 4	5, 2
2, 5	4, 4	6, 1

X..

1, 6	3, 4	5, 3
2, 5	4, 3	6, 1

Y..

1, 6	3, 4	5, 2
2, 5	4, 3	6, 1

Z..

- **A.** Z
- **B.** W
- **C.** X
- **D.** Y

Answers: Sample Spaces of Compound Events

1. B
2. B
3. B
4. D
5. D
6. C
7. A
8. B
9. A
10. A

Explanations

1. Start by finding all the possible outcomes for a bicycle, helmet, and hand wear. Since there are 3 bicycles choices, 3 helmet color choices, and 2 hand wear choices, there are $3 \cdot 3 \cdot 2 = 18$ possible outcomes.

Use the table to create 18 sets with one item from each column.

Type of Bike	Helmet Color	Hand Wear
Cruiser (C)	Black (B)	Full Gloves (F)
Mountain (M)	White (W)	Half Gloves (H)
Touring (T)	Gray (G)	

The complete list of all possible outcomes is shown below.

C, B, F	M, B, F	T, B, F
C, B, H	M, B, H	T, B, H
C, W, F	M, W, F	T, W, F
C, W, H	M, W, H	T, W, H
C, G, F	M, G, F	T, G, F
C, G, H	M, G, H	T, G, H

2. Sarah has eight cards from a pack of well shuffled cards. Out of those eight cards, five are spades, two are clubs and one is hearts.

So, one possible outcome is that 3 spades cards are chosen. She can also choose 2 spades cards and 1

hearts card or 2 spades cards and 1 clubs card.

Sarah has 2 clubs cards, so two other possible outcomes are that she chooses 2 clubs cards and 1 spades card or 2 clubs cards and 1 hearts card.

She can also choose 1 spades card, 1 hearts card, and 1 clubs card.

So, the possible unique outcomes if Sarah chooses 3 cards randomly at a time are shown in list **W**.

3. To find the possible outcomes for pizza combinations, multiply the number of crusts, 3, by the number of toppings, 5.

crust choices × topping choices = pizza combinations

3 × 5 = 15

So, there are **15** possible pizza combinations.

4. Start by finding all the possible outcomes for the finish and the color. Pair each finish, matte (M) and glossy (G), with each color option, color (C) and black and white (B).

M, C

M, B

G, C

G, B

Since there are 4 choices for sizes and 4 choices for finish and color, there are 4 × 4 = 16 possible outcomes. Pair each finish and color option with each size to find all 16 possible outcomes.

The complete list of all possible outcomes is shown below.

1, M, C	2, M, C	3, M, C	4, M, C
1, M, B	2, M, B	3, M, B	4, M, B
1, G, C	2, G, C	3, G, C	4, G, C
1, G, B	2, G, B	3, G, B	4, G, B

5. The first team can be paired with any of the other teams.

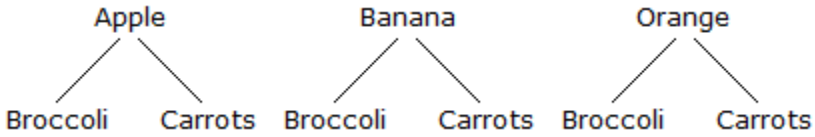
The second team can be paired with any of the other teams except for the first team, because the matchup with the first team has already been shown.

This pattern continues until all the teams have played against all the other teams.

Therefore, the diagram **Y** shows all of the possible games within a division.

6. There are 3 different pieces of fruit and 2 different vegetables.

The tree diagram below shows the sample space for this situation.



7. Start by finding all the possible outcomes for buying an ebook on yoga and ordering a paperback book on health.

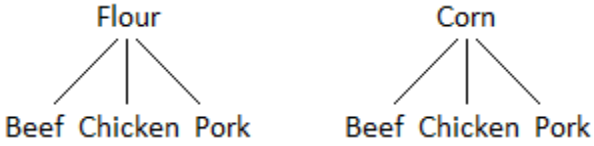
There should be two branches, one to the ebook and one to the paperback book. Each format must have three branches: to a recipe book, to a book on yoga, and to a book on health.

The tree diagram with the list of possible outcomes is shown. The possible outcomes for buying an ebook on yoga and ordering a paperback book on health are highlighted.

So, the correct tree diagram is **Y**.

8. There are 2 types of tortillas and 3 types of meat for the tacos.

The tree diagram below shows all of the possible outcomes for this situation.



9. Each flip of the coin has two possible outcomes, Heads **H** or Tails **T**.

Possible outcomes for the 1st flip of the coin is **2**.
Possible outcomes for the 2nd flip of the coin is **2**.
Possible outcomes for the 3rd flip of the coin is **2**.
Possible outcomes for the 4th flip of the coin is **2**.

Thus, the total number of outcomes for the experiment is

$$2 \times 2 \times 2 \times 2 = \mathbf{1616}$$

The sample space of the experiment is listed below:

H= heads
T = tails

1. **H-H-H-H**
2. **H-H-H-T**
3. **H-H-T-H**
4. **H-H-T-T**
5. **H-T-H-H**
6. **H-T-H-T**
7. **H-T-T-H**
8. **H-T-T-T**
9. **T-H-H-H**
10. **T-H-H-T**
11. **T-H-T-H**
12. **T-H-T-T**
13. **T-T-H-H**
14. **T-T-H-T**
15. **T-T-T-H**
16. **T-T-T-T**

10. Start by finding all the possible outcomes when 2 number cube are rolled. When a single number cube is rolled, it has six possible outcomes. So, if two number cube are rolled, the total number of possible outcomes is given below.

$$6 \times 6 = 36 \text{ possible outcomes}$$

The complete list of possible outcomes is shown below. The possible outcomes that have a sum of 7 are highlighted below.

1, 1	2, 1	3, 1	4, 1	5, 1	6, 1
1, 2	2, 2	3, 2	4, 2	5, 2	6, 2
1, 3	2, 3	3, 3	4, 3	5, 3	6, 3
1, 4	2, 4	3, 4	4, 4	5, 4	6, 4
1, 5	2, 5	3, 5	4, 5	5, 5	6, 5
1, 6	2, 6	3, 6	4, 6	5, 6	6, 6

English Language Arts

Grade 7 ELA: Theme

The Flying Trunk

Once upon a time, many years ago in Copenhagen, Denmark, a wealthy merchant had a son called Erik. Erik was a good-looking lad, intelligent, but very lazy. Instead of studying or doing some work, he liked to spend his days roaming about, amusing himself with his friends and squandering his father's money. When the merchant died, he left all his money to Erik, who spent it in a matter of months.

The only thing left was an empty magic trunk. The minute anyone stepped inside, the trunk rose into the air. One day, Erik, who had no intention of working for a living, decided to face the unknown and seek his fortune. So, he stepped into the trunk and, for days on end, flew across the seas and over woodlands and deserts. At last, he found himself above a city in the East and ordered the trunk to land on the terrace of a wonderful palace. Erik stepped out of the trunk and there in front of him stood a girl, staring at him in amazement.

"I'm Tamara, the Sultan's daughter," she said. "Who are you?"

Quick to turn the situation to his own advantage, Erik replied, "I'm the god of your people. I have come to ask for your hand in marriage."

Fascinated by the handsome stranger and certain that he really was a god, she happily said yes and called her family. The Sultan welcomed the youth with great honors and immediately started to make arrangements for the wedding.

The day before the ceremony, Erik stuffed the trunk full of jewels, golden candlesticks, and fine silks and flew away from the palace towards Copenhagen. However, weighed down by its valuable load, the trunk fell into the sea off the Danish coast. Erik managed to swim ashore and return to Copenhagen, where he sang sad songs at street corners for a living.

In the East, on the terrace of a magnificent palace, a young girl sadly glanced at the sky from time to time, hoping that the god who had suddenly disappeared would come back again.

1. Which event in the passage shows that being irresponsible leads to strife?

- **A.** Erik's father, a wealthy merchant, dies.
- **B.** Erik returns to Copenhagen.
- **C.** Erik spends all of his father's money.
- **D.** Erik claims that he is a god.

---

2. What theme runs through this story?

- **A.** It doesn't pay to travel in a trunk.
- **B.** Greed and dishonesty don't pay off.
- **C.** Good girls shouldn't marry bad boys.
- **D.** Having a job helps build character.

The Mosquito Who Foiled the Lion

Once upon a time, a tiny mosquito started to buzz round a lion he met. "Go away!" grumbled the sleepy lion, smacking his own cheek in an attempt to drive the insect away.

"Why should I?" demanded the mosquito. "You're king of the jungle, not of the air! I'll fly wherever I want and land wherever I please." And so saying, he tickled the lion's ear. In the hope of crushing the insect, the lion boxed his own ears, but the mosquito slipped away from the now dazed lion.

I don't feel it any more. Either it's squashed or it's gone away, the lion thought. But at that very moment, the irritating buzz began again, and the mosquito flew into the lion's nose. Wild with rage, the lion leaped to his hind legs and started to rain punches on his own nose. But the insect, safe inside, refused to budge. With a swollen nose and watery eyes, the lion gave a terrific sneeze, blasting the mosquito out. Angry at being dislodged so abruptly, the mosquito returned to the attack: BUZZ! BUZZ! It whizzed round the lion's head. Large and tough as the lion was, he could not rid himself of his tiny tormentor. This made him angrier still, and he roared fiercely. At the sound of his terrible voice, all the forest creatures fled in fear, but paying no heed to the exhausted lion, the mosquito said triumphantly, "There you are, king of the jungle! Foiled by a tiny mosquito like me!"

And highly delighted with his victory, off he buzzed. But he did not notice a spider's web hanging close by, and soon he was turning and twisting, trying to escape from the trap set by a large spider. "Bah!" said the spider in disgust, as he ate it.

"Another tiny mosquito. Not much to get excited about, but better than nothing. I was hoping for something more substantial."

And that's what became of the mosquito that foiled the lion!

adapted from "The Lion and the Mosquito" by the Grimm Brothers

3. Which of these **best** describes the story's theme?

- ○ **A.** The mosquito is mightier than the lion but weaker than the spider.
- ○ **B.** Gentleness is a far more effective weapon than harshness.
- ○ **C.** Be careful what you boast about; it may come back and bite you.
- ○ **D.** Spiders are clever creatures because they catch and eat mosquitoes.

The Little Golden Bird

Once upon a time, several Buddhist monks lived in an enormous temple surrounded by a stunning garden full of bright flowers and unusual plants. The serenity of their surroundings helped them to forget the rest of the world. Throughout each day, the monks would pray and meditate. Then one day, a young monk arrived at the temple. He told them about the world beyond the garden walls. He described other cities which were full of bright lights, entertainment, and pleasure. A flame of curiosity had been lit in the monks. Their lives at the temple seemed lonely in comparison to this other world they were hearing about. They did not want to stay in a world they once thought was paradise.

The young monk led small groups of monks away from the temple and its garden. Only a few stayed behind. The pathways of the garden became overtaken by weeds. The temple felt deserted and empty. Finally, only five monks remained. Although they loved their sacred home, they had a yearning to explore the new world they had heard about. So, they packed their bags and got ready to leave.

As they were about to turn their backs to leave the temple, a golden bird flew over their heads dangling five long white strings. Drawn toward the strings like magnets, each monk grabbed onto a string. The little group was immediately swept away to this new world to join the other monks. While there, they saw this outside world for what it really was. They saw a world that was full of hate, misery, dishonesty, and violence, a world without peace or morals. It was a long journey back to the temple. When the golden bird returned the monks, they decided never to leave it again. The bird circled overhead three times and then disappeared into the sky. It was then the monks knew that Buddha had come to help them find the pathway to true happiness.

adapted from a Brothers Grimm fairy tale

4.

> Their life at the temple seemed lonely in comparison to this other world they were hearing about. They did not want to stay in a world they once thought was paradise.

Which theme in the story is reflected in the sentences above?

- ○ **A.** It is impossible to live in paradise because there is no such thing as paradise.
- ○ **B.** Outsiders are dangerous and should never be allowed into your home.
- ○ **C.** That which is new often appears more desirable than that which is old.
- ○ **D.** Do not get stuck in one place for long because it will become a lonely place.

5. The theme of this story shows up in literature all over the world—for example, in the story of *The Wizard of Oz*. What is one way to state the theme of "The Little Golden Bird"?

- **A.** True happiness is found very close to home.
- **B.** The world is a dark, dangerous, and scary place.
- **C.** Don't stray very far from home, or you'll get lost.
- **D.** Always listen to little golden birds carrying string.

6.

> They saw a world that was full of hate, misery, dishonesty, and violence, a world without peace or morals.

The monks who saw the "outside world for what it really was" would most likely agree with which statement?

- **A.** Birds should be considered sacred because of the vision we were shown.
- **B.** Never forget that the outside world is as important as the world you know.
- **C.** Do not become trapped doing only what you have always done before.
- **D.** It is important not to be too easily persuaded by beautiful words.

7. The theme of good triumphing over evil appears in many classic fairy tales, such as "Snow White and the Seven Dwarfs" and "Goldilocks and the Three Bears." Which of the following stories uses this same theme?

W. A fire-breathing dragon is about to wipe out a mountain town, but Wilford the Wise arrives just in time and tricks the dragon into thinking the townspeople are demons. The dragon runs away scared and never comes back.

X. A young man falls asleep for 100 years, and when he wakes up, he cannot find his home. His mother has been searching through time to find her son, and at last she finds him.

Y. A poor boy, Jonathan, switches places with a rich boy, Jacob, who looks just like him. They each learn about each other's lives and decide they want their old lives back.

Z. A miserly old king won't give his daughters any of his treasures until they prove that they're virtuous. Each daughter goes out into the world to prove this, except for the youngest daughter, Lilith, who stays and takes care of her old father. Lilith is the one the king rewards with all his riches, which she decides to share equally with her sisters.

- ○ **A.** Story Z
- ○ **B.** Story X
- ○ **C.** Story W
- ○ **D.** Story Y

For all the years I knew my grandma, she could barely see. Grandma was legally blind, and yet she knew, by feel, the location of every dish in her kitchen and every work of literature on the bookcase in the living room.

I remember especially the bird-like way she peered at things. I'd bring her a copy of my latest school picture, and she'd hold the photo an inch or two from her face, tilt her head to one side, and inspect it before saying, "Very pretty." I used to think she was just being polite, that she really couldn't see me in the picture. But then she'd add, "That pin you're wearing was your mother's." How did she see that little blur on my jacket? The things she could see never failed to amaze me.

Watching television with Grandma, I never failed to learn something. Usually it was the complicated plot twist of one of her favorite soap operas—*The Guiding Light* or *As the World Turns*. We grandkids would curl up on the big couch while Grandma pulled up a footstool and planted herself right next to the TV, elbows on her knees, to watch the screen. At the commercial break, she'd explain who was marrying whom and who was in the hospital and who had recently come back from the dead. She seemed to have no trouble identifying the characters whom she could barely see. Whether or not she could bring them into sharp focus, they were as real to her as her giggling grandkids.

For a treat, we'd sometimes pile into our grandparent's black car for a drive around town: my grandfather at the wheel, my long-legged older brother in the front seat, and Grandma sandwiched between me and my little brother in the back—but sitting so far forward she was practically in the front. I'd imagined all she could see was a blur of images rushing past, yet she could always tell when Grandpa had missed a turn or forgotten to turn on his headlights. Returning home, Grandma would wave at the boy who mowed their lawn and point out the new fruit on the plum tree in their yard.

In later years, when I visited from college, Grandma would always be waiting when I pulled up in my old orange car (that's admittedly hard to miss, no matter how bad one's vision). She'd greet me with a bear hug. Then she'd surprise me, every time, with what she could see. Holding my face in her hands, she'd turn my head from side to side and announce, "You got your hair cut!" as if I had won the lottery and forgotten to tell her. I began to wonder if we rely on our eyes too much—if maybe, with our perfect sight, we're actually missing the details my grandma and her poor vision never failed to catch.

from the personal writings of Teresa R. Herlinger

8. One theme present in this story is that people adjust to challenging circumstances in their lives. What sentence from the passage **best** reflects this theme?

- **A.** "Usually it was the complicated plot twist of one of her favorite soap operas—The Guiding Light or As the World Turns."
- **B.** "For all the years I knew my grandma, she could barely see."
- **C.** "She knew, by feel, the location of every dish in her kitchen and every work of literature on the bookcase in the living room."
- **D.** "For a treat, we'd sometimes pile into our grandparent's black car for a drive around town."

King Midas and the Golden Touch (Greek myth)

King Midas wants more and more gold and is finally granted his wish: Everything he touches will turn to gold. The Midas touch! He is ecstatic, as even the flowers become gold under his powerful touch. Unfortunately, when King Midas touches his daughter, she turns into a gold statue, and it is at that moment he realizes that all the gold in the world does not compare to his daughter or her love.

9. Which sentence or phrase from the passage reflects the theme that it is important not to be blinded by greed?

- ○ **A.** "Everything he touches will turn to gold."
- ○ **B.** "When King Midas touches his daughter, she turns into a gold statue."
- ○ **C.** "He is ecstatic, as even the flowers become gold under his powerful touch."
- ○ **D.** "King Midas wants more and more gold and is finally granted his wish."

The Trek

Joshua heard his friends discuss the upcoming hike. Joshua's friends had decided to go on a hike to the mountains on the outskirts of their town, and they planned on having an overnight camp there. While Joshua's friends couldn't be more excited about the hike, Joshua felt his heart flutter nervously. He had never been on a hike before and the thought of being in a forest at night, climbing steep rocks, and probably seeing insects and animals made him want to back out of the plan. Joshua's friends knew that he was terrified and tried their best to soothe his mind by promising that nothing would go wrong and he would enjoy the experience.

That night, Joshua was about to call his friends informing them that he wouldn't be joining the hike. But his parents stopped him and encouraged him to be brave and try to face his fears. Joshua hesitated but half-heartedly agreed to go.

On the day of the hike, Joshua silently trembled. *I have to be brave*, he kept telling himself again and again. The hike began, and in the beginning, Joshua struggled to keep up with his friends as he was too busy stopping every now and then to ensure that nothing crawled around or near him. However, after a while, he began feeling more relaxed. The fresh aroma of the soil and the quietness of the forest calmed him, and he began to enjoy the hike. Joshua and his friends came across patches where they had to carefully climb rocks. But Joshua's heart no longer fluttered nervously. Instead, he was now filled with excitement.

In the evening, when they camped at a barren patch, Joshua helped his friends find wood to build a fire. He looked up at the glittering twilight sky in awe, and he felt relieved and grateful that he had looked past his fears to live this amazing experience.

10. What is the theme of this selection?

- **A.** Friends support each other during tough times.
- **B.** Being courageous opens doors to new experiences.
- **C.** Hiking is the best way to relax the mind and body.
- **D.** New experiences can lead to new kinds of fear.

Answers: Theme

1. C
2. B
3. C
4. C
5. A
6. D
7. C
8. C
9. B
10. B

Explanations: Theme

1. At the beginning of the passage, Erik squanders his inheritance. This event leads Erik to seek his fortune with the magic trunk. As the rest of the events in the story unfold, the reader sees that Erik's irresponsible nature causes strife.

2. Erik lies to the Sultan's family and tries to make off with the family's wealth. However, all his loot falls in the water, and he's left with nothing. Greed doesn't reward him in the end.

3. The little mosquito in the story brags (or boasts) about how he's foiled the king of the jungle. Because he is so busy boasting, he doesn't see the spider's web, which does him in.

4. Even though the monks live in "what had, till then, seemed paradise," the new monk is able to talk them into leaving. Even though living at the temple is great, the world the young monk tells them about is new and therefore more exciting. Many of the monks are willing to throw away paradise just for a chance at something new.

5. The monks learn from the little bird that they had true peace and happiness right at their home and wouldn't find it in the outside world. The theme is recurring because we see them happy at home at the beginning. At the end, the theme comes up again when they realize they do not want to leave.

6. The story explains that the monks already live in a place that was close to paradise. Then, a stranger shows up, speaking beautiful things about the world outside. Even though the monks are happy in paradise, many of them are persuaded to leave merely by the stranger's words. As it turns out, the real world is not as beautiful as they had all been hoping. Those monks that stay behind would likely agree that it is important not to be too easily persuaded by beautiful words, a common theme in literature.

7. Story W is the only one with an evil figure (the dragon) that is defeated by a good character (Wilford).

8. The circumstance that Grandma has adjusted to in the story is her loss of sight. One way she adjusted was by memorizing where things were "by feel." Grandma knows where every dish in her kitchen is located and where every work of literature sits on the bookcase in the living room all based on feel.

9. King Midas has been blinded by greed. His lust for gold clouds his judgment. It is not until he turns his daughter into gold that he realizes that greed overcomes his judgment and blinds him to the truth. Now, his daughter is lost to him.

10. The overall theme of the story is about facing your fears and trying something new. In the passage, Joshua is nervous because he has never been on a hike before. Also, the thought of being in the forest at night, climbing rocks, and seeing insects and animals terrifies him. Yet, he goes for the hike and ends up having a wonderful time. The readers can infer from this that being courageous can open doors to new experiences.

Grade 7 ELA: Analyze Story Elements

adapted from **A Doll's House**
by Henrik Ibsen

CHARACTERS:
NORA
HELMER

SCENE—*A room furnished comfortably and tastefully, but not extravagantly. At the back, a door to the right leads to the entrance-hall, another to the left leads to Helmer's study. Between the doors stands a piano. In the middle of the left-hand wall is a door and beyond it a window. Near the window are a round table, armchairs, and a small sofa. In the right-hand wall, at the farther end, another door; and on the same side, nearer the footlights, a stove, two easy chairs and a rocking-chair; between the stove and the door, a small table. Engravings on the walls; a cabinet with china and other small objects; a small book-case with well-bound books. The floors are carpeted, and a fire burns in the stove.*

It is winter. A bell rings in the hall; shortly afterwards the door is heard to open. Enter NORA, humming a tune and in high spirits. She is in outdoor dress and carries a number of parcels; these she lays on the table to the right. She leaves the outer door open after her, and through it is seen a PORTER who is carrying a Christmas Tree and a basket, which he gives to the MAID who has opened the door.

NORA: Hide the Christmas Tree carefully, Helen, and be sure the children do not see it until this evening, when it is dressed. *[To the PORTER, taking out her purse.]* How much?

PORTER: Sixpence.

NORA: There is a shilling. No, keep the change. *[The PORTER thanks her, and goes out. NORA shuts the door. She is laughing to herself, as she takes off her hat and coat. She takes a packet of macaroons from her pocket and eats one or two; then goes cautiously to her husband's door and listens.]* Yes, he is in. *[Still humming, she goes to the table on the right.]*

HELMER: *[calls out from his room]*. Is that my little lark twittering out there?

NORA: *[busy opening some of the parcels]*. Yes, it is!

HELMER: Is it my little squirrel bustling about?

NORA: Yes!

HELMER: When did my squirrel come home?

NORA: Just now. *[Puts the bag of macaroons into her pocket and wipes her mouth.]* Come in here, Torvald, and see what I have bought.

HELMER: Don't disturb me. *[A little later, he opens the door and looks into the room, pen in hand.]* Bought, did you say? All these things? Has my little spendthrift been wasting money again?

NORA: Yes but, Torvald, this year we really can let ourselves go a little. This is the first Christmas that we have not needed to economize.

HELMER: Still, you know, we can't spend money recklessly.

1. How does the setting shape Nora's character?

- **A.** The setting shows that Nora is a light-hearted person who enjoys celebrating the Christmas season with her family.
- **B.** The setting shows that Nora is a nervous person who is afraid to make decisions without her husband's approval.
- **C.** The setting shows that Nora is a persistent person who struggles hard to make the holiday memorable for her husband and children.
- **D.** The setting shows that Nora is a selfish person who loves to go shopping and eat macaroons without anyone finding out about it.

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2. How does the setting contribute to the plot?

- **A.** The setting illustrates why Helmer is annoyed by Nora's cheerful behavior during the holiday.
- **B.** The setting helps the reader understand Nora's attitude toward Helmer's work.
- **C.** The setting creates a conflict between Nora and Helmer about how to spend their money.
- **D.** The setting helps establish that Nora and Helmer live a luxurious and comfortable life.

The Adoptee

Meagan's annoyance made her grimace as she perused the board advertising after-school activities "designed to Stimulate, Participate, and Motivate," the school's new initiative that required all 7th graders register for one after-school activity.

"This will afford you a great opportunity to make friends, Meagan!" Mom had advised.

"I have friends—at my old school, remember?"

It was hopeless, of course. The move had been accomplished, the new job had commenced, and the kids at school had continued to promenade by her in the hallway, silent as the walls. Meagan longed to hear her grandmother's wise counsel, which wouldn't have been to join the Homework Club. Who makes a club out of doing homework? Meagan thought as she twirled the small pendant hanging on a gold chain around her neck, a gift from Grandmother. She sighed and clicked her tongue as she continued down the list.

"Artists and Writers Club. Don't draw, can't write. Computer Club. Not that smart. Drama Club. Speak in front of people; no, thank you! Math Club. Are you kidding me? It's bad enough I have math homework every day, but a whole club about it. I don't think so. Trailblazers Club. What kind of trail could I possibly blaze?"

The bell would soon ring, liberating throngs of chattering, gossiping friends, who would be unyielding to the reluctant new student pressing her way through the masses. Because her teacher had specified she return to class before the bell, Meagan turned to stroll back when "Adopt-A-Grandparent" caught her eye, and she snatched the information flyer from the board.

On Tuesday afternoon, Meagan waited in line with a dozen other students for the bus that would drop them at Victoria Gardens Retirement Home for a couple of hours. When a girl in line gazed her way, Meagan averted her eyes and brushed an imaginary piece of lint from her jacket.

Upon their arrival at the destination, the Activities Director escorted them to a great room where Meagan searched a sea of glistening white coiffures wishing one of the styled heads belonged to her grandmother, knowing it was impossible. Then she noticed a small woman in a wheelchair, alone, on the far side of the room and, with nervousness, approached the shrinking figure. The Activities Director had advised them to speak loudly, so Meagan said, "I'm MEAGAN!"

"I'm not supposed to be here!" the little woman barked in a thick accent. "Why can't I go home?"

"Where are you from?" Meagan ventured.

"I've lived in dis country sixdy-dree years, but I was born in Italy. Umph! When can I go home?" Her dark eyes smoldered, while a voice boomed from the game room, "B-37! That's B-37!"

"Would you like to play Bingo?" Meagan offered.

"No! I can't hear dat guy. He never speaks loud enough."

"What's your name?" The woman put a shriveled hand to her ear. "WHAT'S YOUR NAME?"

"Lea."

"THAT'S A PRETTY NAME. WHAT DO YOUR GRANDCHILDREN CALL YOU?"

"I don't have any children. My husband had a son; his grandchildren called me 'Mama Leeee,'" she said, drawing out the name in her Italian accent. She chuckled and mimicked a child, "Mama Leeee!"

"Can I call you Mama Lee?" Meagan inquired. The woman shrugged but nodded her head and smiled, and Meagan spent the afternoon listening to the woman recount her childhood growing up in Rome during World War II. When their visit ended and Meagan assured her new friend she would return every Tuesday, Lea emphatically barked, "Good. Umph!" but her hopeful eyes sparkled.

On the bus, the girl who had looked at Meagan earlier sat next to her. After a few minutes of silence, Meagan looked at her and said, "I met a woman from Italy."

"Really? Cool. I met a man who had been an optometrist for 58 years!"

The giggling girls chatted all the way back to school.

3. Which sentence from the passage **best** describes a conflict in the story?

- **A.** "No! I can't hear dat guy. He never speaks loud enough."
- **B.** On Tuesday afternoon, Meagan waited in line with a dozen other students for the bus that would drop them at Victoria Gardens Retirement Home for a couple of hours.
- **C.** The move had been accomplished, the new job had commenced, and the kids at school had continued to promenade by her in the hallway, silent as the walls.
- **D.** "This will afford you a great opportunity to make friends, Meagan!"

4.. How is the major conflict resolved?

- **A.** Meagan decides to join the Homework Club to make friends.
- **B.** Meagan meets Mama Lee and makes a new friend on the bus.
- **C.** Meagan takes Mama Lee's help to get over her shyness.
- **D.** Meagan realizes that her mother was right all along.

As soon as Curtis woke up, he knew something was wrong. His face seemed like it was on fire and itched something awful! He jumped out of bed and rushed to the bathroom and splashed water on his face, but it really didn't help. He looked closely in the mirror, and the whole right side of his face was red. Alarmed, he yelled for his mother, who rushed into the bathroom. "What's wrong?" she asked. "Why are you screaming?"

"Look at my face," Curtis said and turned to her.

His mother put her glasses on and bent down to examine his face. She touched the red area and pushed his hair back. "It itches like crazy," he said.

She turned his head to one side so the light was better and touched the red area again. "Try not to scratch it," she said, "that'll just make it worse."

"Don't you have something you can put on it?"

"Come into my bathroom, and I'll put some lotion on it," she said.

The lotion helped a little; at least Curtis didn't feel like he wanted to scratch his face off. "What do you think it is?" he asked his mother.

"Well, it looks like something bit you," she said, "maybe a spider."

"In my bed?" he asked and shivered involuntarily.

"Maybe, but weren't you and Trevor playing in the woods yesterday?" she asked.

"That's right, we were, but nothing bit me."

She turned his face to get a better look. "Whether it was in the woods or in your bed, something definitely bit you right there on your cheekbone," she said. "I can see the mark clearly in this light. We're going to have to take you to the clinic."

"But I have school today, and I haven't missed school all year. Can't I go to the school nurse? I think the lotion is really working," he added hurriedly. This last statement was not really true as his face was still hot and itchy, but Curtis was determined to get a perfect attendance award at the awards assembly in May.

"I'd feel better if Dr. Cline looked at it. She can recommend a skin cream that will help you feel better. Go get dressed while I call the clinic. Maybe they can see you first thing and you can go to school a little late."

5. What is the main conflict in the first half of the passage?

- ○ **A.** The light in the bathroom is not bright enough.
- ○ **B.** Curtis' mother cannot find the source of the problem.
- ○ **C.** Curtis wakes up with an unexplained skin rash.
- ○ **D.** Curtis cannot get his mother to take him seriously.

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6. What is the main conflict in the second half of the passage?

- ○ **A.** Curtis is nervous about seeing Dr. Cline.
- ○ **B.** Curtis lies to his mother about the rash.
- ○ **C.** Curtis does not want to go to the clinic.
- ○ **D.** Curtis does not like the school nurse.

Ben slammed the front door and started for his room. “Ben, come in here,” his father said from the kitchen. He could tell by the tone of his father’s voice that he was in trouble. He turned and went into the kitchen where both his parents were sitting at the kitchen table. His father pushed a piece of paper toward him. “Explain that,” he said.

Ben examined the paper. It was a traffic ticket. “Where did this come from?” he asked.

“It came in today’s mail,” his father replied. “It says our car ran a red light at 7:30 on the night of July 23rd. The 23rd was a Saturday, and I believe you had the car that night. Wasn’t that the night you took Jennifer to the concert? I know your mother and I were home watching TV.”

“Yes, I had the car that night, but I didn’t get a ticket,” he said, looking down at the piece of paper, which had a photo of the family car’s license plate.

“Oh yes, you did,” his mother said. “There’s a red-light camera at that intersection now, and it takes a picture of anyone running the light.”

“Unless you were letting someone else drive our car, I’d say you’re the guilty party here.”

Ben dropped the paper on the table as he sighed. “I guess so. Does this mean I lose my license?”

“No, but it does mean you lose some of our confidence in you. What were you thinking, running a red light?” his mother said.

“I’m sorry, Mom and Dad, but the left-turn signal was only letting one or two cars through each time, and we were running late for the concert and had already sat through three lights, at least. Am I going to have to go to court?”

“No, but you do have to pay a $75 fine.”

“Seventy-five bucks!” he said. “That’s more than I paid for the concert tickets.”

His dad squeezed his shoulder. “I guess you’ll stop on yellow next time.”

“I sure will. How long do I have before I have to pay the fine?”

“You have a month from the date on the ticket,” his mother said. “Sorry about that, son.”

7. What is the main conflict of this passage?

- ○ **A.** Ben is stuck at a traffic light on his way to a concert.
- ○ **B.** Ben gets a ticket for driving through a red light.
- ○ **C.** Ben gets upset because he cannot afford to pay the fine.
- ○ **D.** Ben's parents lose their confidence and trust in him.

"Help! Somebody call 9-1-1!" Carmen yelped.

"What's wrong?" Tiffany asked, reaching for her cell phone.

"Look at my legs, they are covered with mosquitoes!" She reached down to brush them off. "I'm a mosquito magnet. If there's a mosquito within two miles of me, it'll find my skin. I'm so tired of being bitten." Carmen and four of her friends had gone to the river to swim and talk.

"That's no reason to call 9-1-1," Tiffany said as she put up her phone.

"Here, try some of this bug spray," Elaine said. "It works for me."

"I don't like the way that stuff feels on my skin," Carmen said. She slapped her legs with both hands. "I didn't think there would be this many mosquitoes this late in the year. I'm afraid I am going to have to leave."

Barb reached in her backpack and pulled out a box of fabric-softener sheets that go in the clothes dryer. "I used to be a mosquito magnet too until I started rubbing these things on my skin," she said. "I haven't had any problem since." She handed the box to Carmen.

Carmen looked doubtful but took out a sheet to sniff it. "It smells better than that bug spray," she said and wiped the sheet over all her exposed skin. Sure enough, not a single mosquito landed on her. "This is fantastic. I'm ready to play!"

8. What is the main conflict in the passage?

- **A.** Carmen and friends are at the river, but she can't swim.
- **B.** Mosquitoes are attacking Carmen, and she wants to leave.
- **C.** Carmen cannot use the bug spray because she is allergic to it.
- **D.** Carmen's friends don't believe that the mosquitoes are biting her.

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9. Carmen solves her problem by

- **A.** calling the emergency services at 9-1-1.
- **B.** wiping her skin with a fabric-softener sheet.
- **C.** swimming in the river to get away from the mosquitoes.
- **D.** slapping the mosquitoes when they land on her.

adapted from **The Landlord's Mistake**
by James Baldwin

In the late 1700s, there were no broad, smooth highways as there are now. Roads were muddy and rough. Travelers often rode on horseback, exposed to wind and weather.

One day, some men were sitting outside a hotel in Baltimore, Maryland, when they saw a mud-spattered horseman coming up the street.

"Here comes a backwoods farmer," said one of the men, laughing. "I wonder where he'll stay for the night."

"Any kind of a place will suit him," answered the landlord. "He's one of those country fellows who can sleep with the horses."

The traveler was soon at the door. "Have you a room here for me?" he asked the landlord.

The landlord prided himself upon keeping a first-class hotel, and he feared that his guests would not like the rough-looking traveler. He answered, "No, sir, every room is full; the only place I could put you would be the barn loft."

"Well, I'll go to the Planters' Tavern," answered the stranger, and he rode away.

An hour later, a gentleman came into the hotel and said, "I wish to see Mr. Jefferson."

"Mr. Jefferson?" asked the landlord.

"Yes, Thomas Jefferson, the vice president of the United States."

"He isn't here."

"I met him an hour ago as he rode into town, and he said that he intended to stop at this hotel."

"The only man that has been here was a man who was so spattered with mud that you couldn't see the color of his coat—he went the Planters'."

"Did he have reddish-brown hair, and did he ride a gray horse?"

"Yes, and he was quite tall."

"That was Mr. Jefferson," said the gentleman.

"Mr. Jefferson!" cried the landlord. "Was that the vice president? Dick, build a fire in the best room! What a dunce I was to turn Mr. Jefferson away! I'll go right round to the Planters' and fetch him back."

He went to the other hotel, where he found the vice president sitting with some friends in the parlor.

"Mr. Jefferson," he said, "I have come to ask your pardon. You were so covered with mud that I thought you were some farmer. If you'll come back to my house, you shall have the best room. Won't you come?"

"No," answered Jefferson. "A farmer is as good as any other man, and where there's no room for a farmer, there's no room for me."

10. How does the setting shape the landlord's character?

- **A.** The setting provides a place where he shows a preference for a type of guest.
- **B.** The setting offers a location for him to demonstrate kindness to strangers.
- **C.** The setting creates the reason that he takes pride in living in the city.
- **D.** The setting contributes to his desire to make the inn comfortable for farmers.

Answers: Analyze Story Elements

1.A
2. C
3. C
4. B
5. C
6. C
7. B
8. B
9. B
10. A

Explanations

1. The setting tells where and when a story takes place and helps to develop the different characters in the story. The setting of this drama helps to shape Nora's character by portraying her to be light-hearted and cheerful during the holiday. The setting reveals Nora's cheerfulness by describing her to be a person who enjoys creating traditional holiday celebrations for her family.

2. The setting tells where and when a story takes place. The plot is what happens in the story and includes the main problem and how the characters resolve the problem. This drama takes place at Nora and Helmer's house during Christmastime. The setting of the drama helps create the conflict between Nora and Helmer about spending money during the holiday when Helmer tells Nora that she is being a spendthrift and has been wasting money again.

3. In the story, Meagan has moved to a new place and joined a new school. The conflict in the story occurs when Meagan finds it difficult to make friends at her new school. The sentence that best describes this conflict is "The move had been accomplished, the new job had commenced, and the kids at school had continued to promenade by her in the hallway, silent as the walls."

4. In the beginning of the story, Meagan has no friends at her new school and is reluctant to join any of the after-school activities. However, she later visits a retirement home and meets Mama Lee. On the bus ride back home, Meagan starts talking to another girl, and the two become friends. This resolves the original conflict in the story.

5. The conflict in the first part of the passage is about a fiery red rash Curtis sees on his face when he wakes up. When his mother looks at it, she thinks something has bit him.

6. The main conflict in the second part of the passage revolves around Curtis not wanting to miss school because he is on track to get a perfect attendance award. His desire to get the award conflicts with his mother's desire to have the rash examined by a doctor.

7. Late for a concert, Ben tries to sneak through an intersection at a left-turn signal. He does not know the intersection has cameras that photograph the license plate of any car running a red light. A ticket is automatically sent to the owner of the car, Ben's father, who is upset with Ben's irresponsible driving.

8. The main conflict of the passage is Carmen's main problem – she is a mosquito magnet. She thought the mosquitoes would not be a problem so late in the year, but she was wrong, and the mosquitoes are feasting on her, so she wants to leave.

9. Carmen accepts Barb's idea to wipe a fabric-softener sheet on her skin as a way to keep the mosquitoes off her skin. Although she doubts the idea, she tries it, and it works. Problem solved!

10. The setting of the inn provides a place where the landlord shows a preference for a type of guest, which is an unbecoming part of the landlord's character because he only wants a certain type of guest to stay at his inn. When he does not know who Jefferson is, the landlord says that the only space available is in the barn. When he realizes that he turned away the vice president, the landlord suddenly becomes willing to give him the best room in his inn

Grade 7 ELA: Rhyme and Repetition

Waiting for the Spring

The snow has come and gone away.
The sky is the prettiest blue.
The children have come out to play
but I am waiting for the green.

I like to wear my purple frock
and sing along with the birds.
I want to sleep on my hammock
and only see the happy dreams.

1. Which rhyme scheme does the poet use in "Waiting for Spring"?

- ○ **A.** The first and third lines of each stanza rhyme.
- ○ **B.** The first, second, and fourth lines of each stanza rhyme.
- ○ **C.** The third and fourth lines of each stanza rhyme.
- ○ **D.** The first and second lines of each stanza rhyme.

adapted from **In No Strange Land**
by Katherine Butler

He was in the heart of the crowd, in it, and of it. It was the crowd of late afternoon, whose forward movement is the expression of a common wish to cease to be a crowd. His was one of the thousand faces that are almost tragical with weariness, tragical without thought. At five o'clock, the sparkle of the morning is forgotten. There is no seeking of hidden treasure in the face opposite, for the face opposite, whosesoever it may be, has become too intrusive with its own burden to yield any light of recognition.

He was running down the elevated stairs at the appointed minute, when his foot slipped, and he fell. It seemed hardly a second before he was up again, angered by the sudden congestion about him. One white-cheeked woman put her hand to her mouth and gave a cry.

"Let me by!" he exclaimed, straining to break through the fast-pressing barrier. The very throng of which he had been an undistinguishable member had suddenly closed round him, focusing its glance upon him, nearer and nearer, and it was only by extreme struggle that he was able to push away and be free.

He sat down in the train, breathless from his final sprint. He felt as if the incident had roused him from some deep weariness of which he had hitherto been unaware. With his quickened pulse, his thoughts ran more quickly, more crystally onward. He felt as if a wonderful but unknown piece of luck had befallen him. An ecstatic sense of fortune made him wonder at himself.

"What am I so happy about, all of a sudden?" he thought.

He made an indifferent survey of his fellow passengers, and as he noted the familiar heads and shoulders, he had a most curious sensation of utter bliss, and was thankful that his lot was not theirs.

"Am I dreaming?" he asked himself. "Am I about to discover a gold mine, or what?"

As the train moved out, he sank comfortably back into his seat, and with his chin on his hand he took up his accustomed nightly gaze on the outer landscape. His thoughts ran back to the morning. He saw the room where he had gone to wake his children. In each of the three small beds, a pretty child of his lay stretched in sleep. Very tender they looked, very lovable, and very young, lips and nostrils just stirred by the tiny motion of their breathing.

2. The author repeats the word "crowd" in the story's first two lines to

- ○ **A.** draw the reader into the main character's point of view.
- ○ **B.** create an image of the main character being surrounded by people.
- ○ **C.** give the sense that the main character feels trapped by his life.
- ○ **D.** make it seem like the main character faces danger.

Facing It
by c.safos

He set his face away
from the eclipse, his eyes seeking
their way to a place where the sun
does not see. In the distance,
the wheat waved and wilted under the wind
whose breath blew beyond the bare field.
The day found its bearings under
the chorus of cicadas chirping,
their tempo keeping time like a moving train.

He set his face away from all this
and beneath him, the rainwater from the storm drained
groaning into a gorge with a slight gurgle and sigh.
The fields fall fallow under the flood and freeze, and somehow he found her—
her hair dancing
like Medusa's split ends,
his feet cementing him
like a scarecrow wearing fearless birds.

3. What effect does the following line have on the poem?

the wheat waved and wilted under the wind

- **A.** It imitates the whirring sound of the wind.
- **B.** It creates a sense of being stuck in a box.
- **C.** It compares wind to wheat.
- **D.** It shows the difference between wheat and a flower that wilts.

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4. What effect does the following line have on the poem?

their tempo keeping time like a moving train

- **A.** It compares cicadas to a train on a railway.
- **B.** It creates a sense of travelling.
- **C.** It shows the difference between the noises of a cicada and a train.
- **D.** It imitates the ticking sound of a train traveling on a railway.

Joy

Joy is the calm in the old willow tree,
that stands still and bold in the midst of a breeze.
Joy is the golden, warm rays of the sun,
that wakes the flowers, when the day has begun.

Joy is the sounds of rain's pitter and patter,
as you splash in puddles of glass that shatters.
Joy is the crisp, frosty feeling of snow,
that brightens your cheeks and makes snowflakes that blow.

Joy is the howling wind up in the trees,
that lifts you up, up, up to float with the leaves.
Joy is discovered in a brand new way.
Look carefully, you'll discover it today.

5. Why does the poet repeat the phrase "joy is" throughout the poem?

- ○ **A.** The poet wants to create a comforting tone.
- ○ **B.** The poet wants to make the poem easy to read.
- ○ **C.** The poet wants to emphasize the theme of the poem.
- ○ **D.** The poet wants to give the poem an uplifting mood.

The Story of Billy

Billy Bob begged for a big boat
because he liked to stay afloat.
He thought that he could be a fish.
A dream it was, only a wish.
Billy never learnt to swim.
The fear of drowning frightened him.
He did not even touch the pool.
Once, little Billy brought a tool
to sit and watch the river flow.
He watched the children come and go.
Even the turtles, which were slow,
made Billy jealous with their show.
"That's it," he said. "I'm going in."
He was the bravest he'd ever been.
His brother taught him all the tricks.
Now Billy swims. He's very quick.

6. Which line from the poem is an example of alliteration?

- **A.** He was the bravest he'd ever been.
- **B.** Billy Bob begged for a big boat
- **C.** He did not even touch the pool,
- **D.** The fear of drowning frightened him.

adapted from **Sea Fever**
by John Masefield

I must go down to the seas again, to the lonely sea and the sky,
And all I ask is a tall ship and a star to steer her by,
And the wheel's kick and the wind's song and the white sail's shaking,
And a grey mist on the sea's face, and a grey dawn breaking.

I must go down to the seas again, for the call of the running tide
Is a wild call and a clear call that may not be denied;
And all I ask is a windy day with the white clouds flying,
And the flung spray and the blown spume, and the sea-gulls crying.

I must go down to the seas again, to the rough, sloping scarp,
To the gull's way and the whale's way where the wind is strong and sharp;
And all I ask is a merry yarn from a laughing fellow-rover,
And quiet sleep and a sweet dream when the long trick's over.

7. Why does the poet begin each stanza with "I must go down to the seas again"?

- ○ **A.** to highlight how trapped the speaker feels
- ○ **B.** to lessen the speaker's reluctance to visit the ocean
- ○ **C.** to suggest the speaker is waking from a dream
- ○ **D.** to emphasize the speaker's strong desire to sail

adapted from **The Knave of Hearts**
by Louise Saunders

CHARACTERS
THE MANAGER, BLUE HOSE, and YELLOW HOSE
SCENE: The Manager appears before the stage curtain.

THE MANAGER (*Bowing deeply*): Ladies and gentlemen, you are about to hear the truth of an old legend that has persisted wrongly through the ages about the Knave of Hearts, who was no knave but a very hero indeed. The truth, you will agree with me, gentlemen and most honored ladies, is rare!

But we, gentlemen and ladies, flounder about in a tangled net of prejudice. We are blinded by custom, we are crushed by misunderstanding, we are distracted by violence, we are deceived by hypocrisy, until only too often villains receive the rewards of nobility and the truly great-hearted are suspected, distrusted, and slandered.

And so, ladies and gentlemen, for the sake of justice and also, I dare to hope, for your approval, I have taken my puppets down from their dusty shelves. I have polished their faces, brushed their clothes, and strung them on wires, so that they may enact for you this history.

(*He parts the curtains, revealing two PASTRY COOKS in flaring white caps and spotless aprons. They are in one of the kitchens of POMPDEBILE THE EIGHTH, KING OF HEARTS.*)

THE MANAGER: You see here, ladies and gentlemen, two pastry cooks belonging to the royal household of Pompdebile the Eighth—Blue Hose and Yellow Hose, by name. At a signal from me they will spring to action. Happily, you need have no fear that, should they please you, your appreciation may go to their heads—their heads being but things of wire and wood; and happily, too, as they are but wood and wire, they will be spared the shame and humiliation that would otherwise be theirs should they fail to meet with your approval.

The play, ladies and gentlemen, will now begin.

(*He claps his hands. Instantly the two PASTRY COOKS come to life. THE MANAGER bows himself off the stage.*)

BLUE HOSE: Is everything ready for this great event?

YELLOW HOSE: Everything. The fire blazing in the stove, the Pages, dressed in their best, waiting in the pantry with their various jars full of the finest butter, the sweetest sugar, the hottest pepper, the richest milk, the—

BLUE HOSE: Yes, yes, no doubt. (*Thoughtfully*) It is a great responsibility, this that they have put on our shoulders.

YELLOW HOSE: Ah, yes. I have never felt more important.

BLUE HOSE: Nor I more uncomfortable.

8. Read the line from the drama.

We are blinded by custom, we are crushed by misunderstanding, we are distracted by violence, we are deceived by hypocrisy, until only too often villains receive the rewards of nobility and the truly great-hearted are suspected, distrusted, and slandered.

Why does the Manager repeat the phrase "we are" in this line?

- **A.** to emphasize his point about injustice
- **B.** to highlight his effort in the play
- **C.** to generate sympathy for his situation
- **D.** to show his talent with words

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9. I could never be as hardworking as my father. I had grown up hearing stories about how he started helping with the family's income when he was a young boy. Somehow, he always managed to ace in his studies and sports as well. Even though I thought I was doing pretty well compared to my peers, to my father, I was not making the best use of time.

"Waste of time in your prime is a crime, my boy!" my father would say whenever I was floating aimlessly in the swimming pool.

At any moment I felt lazy, my father's words would echo in my ears like the ringtone of an alarm.

The rhyme in the father's dialogue

- **A.** explains to the reader the importance of stories.
- **B.** helps the reader imagine the father's childhood.
- **C.** helps the speaker remember his words more vividly.
- **D.** shows how hardworking the speaker really is.

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10. Anna Marie was not tall at all but small like a tennis ball. While her siblings shot up like bamboos, Anna Marie took her time to grow vertically. Surprisingly, she was the most talented athlete among all of them. Nobody could beat her at track and field. Anna Marie was a gifted gymnast and a powerhouse of energy.

The rhyme in this passage

- **A.** reveals Anna Marie's strength of character.
- **B.** shows that physical appearance is important.
- **C.** contrasts the character with other gymnasts.
- **D.** helps the reader imagine the character more vividly.

Answers: Rhyme and Repetition

1. A
2. B
3. A
4. D
5. C
6. B
7. D
8. A
9. C
10. D

Explanations: Rhyme and Repetition

1. **Rhyme scheme** is the pattern of rhyme in a poem. In this poem, the rhyme scheme is the first and third lines of each stanza rhyme. "Away" in line 1 rhymes with "play" in line 3. "Frock" in line 5 rhymes with "hammock" in line 7.

2. The author repeats the word "crowd" to create an image of the main character being surrounded by people.

3. Alliteration is the repetition of the beginning sounds of words.
For example, in "Peter Piper picked a peck of pickled peppers," the first letter, P, is repeated many times.
In this case, the repeated sounds have a hard **W** sound. They are **wheat**, **waved**, **wilted**, and **wind**. By using the “W” sound, the audience gets a sense of a whirring sound (which reflects the noise the wind makes).

4. Alliteration is the repetition of the beginning sounds of words.
For example, in "Peter Piper picked a peck of pickled peppers," the first letter, P, is repeated many times.
In this case, the repeated sounds have a hard **T** sound. They are **tempo** and **time**. By using the “T” sound, the audience gets a sense of the cicadas chirping keeping a beat with a tapping or ticking sound (the same rhythmic sound made by a train traveling on its tracks).

5. Repetition is when a specific word, phrase, or structure is used several times to point out or emphasize a particular idea. The poet repeats the phrase "joy is" to emphasize the theme of the poem.

6. Alliteration is the repetition of the initial consonant. There should be at least two repetitions in a row.

For example: Peter Piper picked a peck of pickled peppers. The first letter, P, is a consonant. It is repeated many times.(If you use a vowel sound rather than a consonant, it is assonance.)
In this case, the repeated consonant sounds have a **B** sound. They are **Billy**, **Bob**, **begged**, **big** and **boat**.

7. Repetition is when a writer uses a specific word, phrase, or structure several times for emphasis. The poem describes many reasons the speaker feels a strong connection to the ocean. At the beginning of each stanza, the poet repeats the clause "I must go down to the seas again" to emphasize "the speaker's strong desire to sail."

8. The Manager repeats the phrase "we are" because he wants to emphasize the point he made about injustice. He repeats "we are" because he wants to stress that both he and the audience are affected by not seeing things objectively.

9. Read the last sentence of the story. It tells the reader that the father's words ring in his ears like the ringtone of an alarm. The rhyme creates a rhythm in the father's dialogue and makes his words hard to forget.

10. Rhyme is often used in fiction and non-fiction to help create a rhythm and a poetic effect. In this passage, the rhyme makes the character's description stand out.

Grade 7 ELA: Inferences in Informational Texts

1. The International Olympic Committee, IOC, is the governing body of the Olympics. The IOC ensures that the games are played fairly. The committee requires athletes to undergo tests to make sure that no one has an unfair advantage. One athlete from the U.S. was not allowed to compete in the 2006 Winter Olympics because he was using a drug. The athlete was taking the legal drug to prevent hair loss. At the 2010 Winter Olympics, a Japanese woman was banned from participating in the luge. She was not allowed to compete because her equipment weighed 13.3 kg. The allowed weight was 13.1 kg. The weight difference was less than half a pound. Neither of these athletes intentionally tried to gain an unfair advantage. The punishments for these accidental mistakes may seem harsh. Nevertheless, the IOC enforced the rules that were set in place.

What can the reader **infer** from this passage?

- ○ **A.** Olympic athletes are not allowed to take life-saving medicine.
- ○ **B.** The International Olympic Committee is very strict.
- ○ **C.** Athletes that cheat at the Olympics do not get caught.
- ○ **D.** The IOC does not like Japan or the United States.

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2. Crude oil is perhaps the most useful and versatile raw material that has become available for exploitation. By the mid-1980s, worldwide production was 53.4 million barrels a day. The world's reserves of crude oil add up to about 700 billion barrels, over half of which are in the Middle East. It is likely that some additional discoveries will be made of new reserves in coming years, and new technologies will be developed for more efficient recovery from known resources. Many experts believe that the supply of crude oil will probably extend into the 21st century, but probably not much longer.

Which of the following can the reader **infer** from the passage above?

- ○ **A.** You can become rich by discovering oil.
- ○ **B.** Burning crude oil causes pollution.
- ○ **C.** New energy sources will be necessary in the future.
- ○ **D.** The price of oil fluctuates wildly and is totally unpredictable.

Even in a city as large and industrialized as Kansas City, beautiful nature can be found and enjoyed. Parks and nature preserves are located all over the city. Sometimes, it can be hard to find them unless you know where to begin looking. A good place to start is the Parks Department Web site. On it, you will find the locations of these and other great parks.

For the nature lover, hiking trails are very important. Trails can be smooth sidewalks through manicured parks or rough dirt tracks through wilderness areas. Kansas City has both and everything in between. Whether you are a young, avid hiker or a senior citizen looking for a leisurely stroll, you will find something.

Shawnee Mission Park is one of Kansas City's most popular parks. This 1,250 acre park is one of the most visited parks in the state. It has beautiful hiking trails for people of all ages and abilities. Native wildlife is everywhere! Also, Shawnee Mission Park has a sparkling lake and camp grounds. For the dog lovers, Shawnee Mission Park has one of the largest off-leash dog parks in the city!

A short drive outside of Kansas City will take you to Fleming Park, the largest park in the area. Fleming Park is a popular destination for bird watchers and is the home of the Burroughs Audubon Library. The park also contains two lakes, campgrounds, and hundreds of miles of trails. Don't forget your bathing suit and your wildlife guide!

In the city, it is easy to forget that we are animals and that we live with nature. Get out to one of these great parks to remember those facts. If you do not have access to a car, check the Parks Department Web site and look for something in your area or just off of the public transportation routes. It is worth your time.

3. From information in the article, the reader can **infer** that dog lovers like parks where they can

- ○ **A.** take their dogs swimming in lakes.
- ○ **B.** take their dogs walking along smooth sidewalks.
- ○ **C.** take their dogs off of leashes.
- ○ **D.** take their dogs hiking on rough dirt trails.

Emu

The emu is a large, flightless bird found in Australia. Many years ago, this bird was also found in Tasmania and King Island, but today, it is only seen on the Australian mainland. It is unofficially considered the national bird of Australia and appears on the nation's coat of arms.

The emu is the second largest bird in the world, behind the ostrich. On average, the male emu is 5.5 to 6 feet tall and weighs around 130-150 pounds. The female emu is larger and heavier than the male. The emu has a set of wings that it flaps to stabilize itself while running or hunting. The emu also has strong legs that help it cover long distances. Unlike the ostrich, the emu's feet have three toes which give it better speed and stability.

4. What can the reader infer about the emu's wings?

- ○ **A.** They are not fully developed.
- ○ **B.** They are very heavy.
- ○ **C.** They are used to provide speed.
- ○ **D.** They are not used for flying.

The city of Dallas, Texas, passed a curfew this year restricting the movement of minors during the day. Because people under the age of 18 are supposed to be in school during the day, the curfew is meant to affect primarily children who choose to skip school or those who decide to drop out. The chief of police explained, "The idea of the curfew came up after large jumps in the rates of theft and vandalism during the day."

Several groups in the community were in favor of the measure. Others believe it is a mistake. Brenely Watson spoke on behalf of a group of concerned citizens. She said, "The police department has no proof that minors are responsible for the increased crime. Perhaps someone should look in a mirror if they really need someone to blame." Mrs. Watson has a 15-year-old son who has perfect attendance at school.

The city council voted in favor of the curfew. It is now law. The mayor praised the police department before and after the vote. "The chief needs us to do everything in our power to help the brave men and women of the police department," he said. "Stopping crime depends on more people than just those wearing badges."

5. In the article, Brenely Watson says, "Perhaps someone should look in a mirror if they really need someone to blame." The reader can **infer** that Ms. Watson believes some of the blame for the rise in crime belongs to

- ○ **A.** the police.
- ○ **B.** the criminals.
- ○ **C.** the adults.
- ○ **D.** the minors.

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6. Based on information in the article, the reader can guess that the curfew

- ○ **A.** would not affect the lives of school dropouts.
- ○ **B.** would greatly affect the life of Brenely's son.
- ○ **C.** would affect the lives of students in school.
- ○ **D.** would not affect Brenely Watson's life much.

7. Thomas Jefferson was born in western Goochland County, Virginia. In 1760 he entered the College of William and Mary in Williamsburg, Virginia. He later studied law and was reasonably successful as a lawyer, but his main source of income came from farming his land. In 1767 Jefferson began work on his mountaintop estate, Monticello, near what is now Charlottesville, Virginia. He designed the mansion himself.

Which of the following can the reader **infer** from the passage above?

- **A.** Jefferson was the third president of the United States.
- **B.** Jefferson wrote the Declaration of Independence.
- **C.** Thomas Jefferson was born in western Goochland County, Virginia.
- **D.** Jefferson was a man with many experiences.

Inkheart, by German author Cornelia Funke, is a wonderful book for young people. Young people will like this book because it has adventure and action on every page. In this book, a 12-year-old girl named Meggie discovers that her father, Mo, can make characters from books appear in the real world. Meggie and her father must keep one step ahead of the evil wizard Capricorn, who wants to use Mo's power to destroy the world. Meggie and Mo are joined by many colorful characters on their journey. One of my favorite characters is Dustfinger, who is a fire eater from the book world. Dustfinger isn't always a "good guy," but he provides a lot of laughs in the book. *Inkheart* is only the first book in this trilogy, and I can't wait to read the next book in the series.

8. Based on this passage, which of the following books would be most similar to *Inkheart*?

- **A.** a fantasy novel about a boy who discovers a dragon in his backyard
- **B.** a fiction novel about a girl who decides to run for class president
- **C.** an autobiography of a student who started a school recycling program
- **D.** a nonfiction book about the history of libraries in the United States

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9. A person would most likely read this paragraph in

- **A.** a book on how to write fantasy novels.
- **B.** a book report about *Inkheart*.
- **C.** an article about fire eaters.
- **D.** a dictionary entry about *Inkheart*.

Making a Personalized Locker Mirror

What you will need:

- One 5 inch round mirror
- One 12 inch by 18 inch sheet of foam board
- Four 3/4 inch craft magnets
- Scrapbook stickers
- Foam letters
- One cardboard or manila folder
- Scissors
- White craft glue
- Jewelry glue

What to do:

1. Divide and cut the foam board into two equal sized pieces. Trace the outline of the mirror in the center of one half of the foam board. Set the other half of the foam board aside for a moment.
2. Trace a fun design around the edges of the outline of the mirror. Use your imagination! Cut the foam board around your design.
3. Cut out the outline of the mirror you drew on the foam board. Make sure to leave a 1 inch border all the way around the circle.
4. Place the mirror on the manila or cardboard folder and trace the outline. Cut this outline and glue it to the back of the mirror with the white craft glue.
5. Use the white craft glue to attach the back of the mirror to the **second** half of the foam board (the half you didn't cut earlier).
6. Set the outline of the mirror (the one you designed yourself) over the top of the actual mirror. Make sure you line them up so that you can see the mirror through the frame. Glue the two pieces together with the white craft glue. Once the glue is dry, cut the edges of the foam backing off.
7. Decorate the frame with the scrapbook stickers and foam letters. Be creative!
8. Use a strong jewelry glue to attach the four magnets to the back of your mirror. Allow the glue to dry completely before you hang it.
9. Enjoy your new locker mirror!

10. If someone wanted to make their locker mirror hang from a hook instead of sticking with magnets, he or she would need to

- ○ **A.** cut the mirror out of the frame and start over.
- ○ **B.** glue the top of the mirror directly onto the hook.
- ○ **C.** glue a loop of string to the back of the mirror.
- ○ **D.** use the stickers to hold the mirror on the hook.

Answers: Inferences in Informational Texts

1. B
2. C
3. C
4. D
5. A
6. D
7. D
8. A
9. B
10. C

Explanations: Inferences in Informational Texts

1. The fact that the IOC did not allow the U.S. athlete or the Japanese athlete to compete in the Olympics because of their accidental mistakes helps the reader infer that the committee is very strict. The committee sticks to the rules and does not make exceptions for the athletes that the passage mentions.

2. The paragraph tells us that, "Many experts believe that the supply of crude oil will probably extend into the 21st century, but probably not much longer." This sentence implies that in the future, we will need to find another alternative source for energy.

3. The article says that Shawnee Mission Park has, for the dog lovers, "one of the largest off-leash dog parks in the city!" If this part of the park is made for dog lovers, then the reader can guess that dog lovers enjoy taking their dogs to places where they can take off the dogs' leashes.

4. The passage talks about the emu, a flightless bird. The passage states that the emu uses its wings for better stability while running. From this, the reader can infer that the wings are not used for flying.

5. When Brenely Watson suggests that the Dallas police should "look in a mirror," she is suggesting that the police share some of the blame for the rising crime. In a mirror, all the police would see is a reflection of themselves. Brenely Watson probably thinks the police are blaming minors for the shortcomings of the police themselves.

6. In the article, it states that the curfew would affect the lives of dropouts. It would not have much affect on the lives of students in school. The article also states that Brenely Watson "has a fifteen-year-old son who has perfect attendance at school." Because Brenely Watson is an adult and because her son is in school, the reader can **infer** that the curfew will have very little effect on Brenely Watson's life.

7. The passage never directly states that Jefferson was experienced, but based upon the facts that he went to several different schools, he was a lawyer, he was a farmer, and he designed his own mansion, it's clear that he was a very experienced person.

8. This passage describes *Inkheart* as having characters and situations that could not happen in real life. *Inkheart* can best be described as a fantasy novel. A fantasy novel about a boy who discovers a dragon in his backyard would be most similar to *Inkheart*.

9. This paragraph introduces the reader to the book *Inkheart* and gives details about why this book should be recommended to young readers. A person would most likely read this paragraph in a book report about *Inkheart*.

10. If someone wanted to change their locker mirror to hang from a hook, he or she would use their knowledge of everyday items to decide how to alter the instructions found in this passage. The best step to take would be to glue a loop of string to the back of the mirror. This would allow the mirror to hang from a hook instead of sticking to the locker with magnets.

Grade 7 ELA: Individuals, Ideas, and Events

Aurora Borealis

At certain times of year in the northern latitudes of Canada, a strange and colorful display of light can be seen in the sky. Composed of red, blue, and green, the display can be compared to a sunset—except it happens at night! This is the aurora borealis, and it has captured the imagination of humankind for centuries.

What causes the aurora borealis? Benjamin Franklin, who is considered by many to be the father of electricity, thought that the mysterious and colorful lights were caused by a concentration of electrical charges in the polar regions. Though he was right about the location of the aurora borealis (which happens near the North Pole), today our understanding of the phenomenon is far more sophisticated.

The aurora borealis differs from other displays of light in the sky. Most of the light we see in the sky is due to reflected or scattered sunlight. Other times, the light comes from internal energy sources, such as when lightning strikes and we see a flash in the sky.

The aurora borealis, by contrast, is caused by particles that enter Earth's atmosphere from above. The process begins with solar winds flowing past Earth. These solar winds come into contact with Earth's magnetic field, creating the magnetosphere. The magnetosphere contains an abundance of electrons.

What happens next is that the electrons from the magnetosphere are drawn to Earth's North Pole. As these electrons descend lower into our atmosphere, they collide with atoms. The atoms then become "excited." In other words, the atoms absorb and store some of the energy from the passing electrons. This energy is then released as photons, i.e., light.

The color of the aurora borealis depends on the types of atoms that collide with the electrons. Because we know that the atmosphere is composed mostly of nitrogen and oxygen, we can guess that the electrons from the magnetosphere normally collide with atoms of nitrogen and oxygen. Oxygen atoms are known to emit photons of green and red. Nitrogen atoms, meanwhile, emit blue photons.

1. What effect do electrons from the magnetosphere have on atoms?

- ○ **A.** They cause the atoms to release hydrogen.
- ○ **B.** They cause the atoms to fall toward the North Pole.
- ○ **C.** They cause the atoms to burst into flame.
- ○ **D.** They cause the atoms to become "excited."

Macaroni and Cheese

Serves: 4
Prep time: 15 minutes
Cooking time: 30 minutes

Ingredients:
1/2 pound penne pasta
1/2 cup butter
3 tbsp. minced fresh onion
1/2 tsp white pepper
1 1/2 tbsps flour
1 tbsp Dijon mustard
1 1/2 cups milk
1 cup grated cheddar cheese
1 cup grated Parmesan cheese
1/3 cup bread crumbs

Directions:

1. Heat the oven to 350 degrees.
2. In a pot, boil the pasta in water until tender. Drain and set aside.
3. Meanwhile, melt 1/3 cup of the butter in a saucepan over medium heat and add the onion. Cook for two minutes.
4. Add the white pepper and flour. Cook, stirring constantly, for three to four minutes. Don't let the flour brown; lower the heat if it does.
5. Add the mustard and milk and bring to a simmer.
6. Simmer for 10-15 minutes. The sauce will thicken. It should be very thick but not gluey. Add more milk if it thickens too much.
7. Once the sauce has simmered for at least 10 minutes, add the cheddar cheese and half the Parmesan.
8. Turn off heat and stir the cheeses in as they melt. Return the pan to low heat if necessary.
9. Working quickly, toss the pasta in the cheese sauce. Toss it well so the sauce gets inside the pasta tubes.
10. Place the pasta in an 11- by 14-inch glass baking dish.
11. Sprinkle the remaining Parmesan cheese over the top.
12. Melt the remaining butter, stir it into the breadcrumbs and sprinkle this mixture over the top of the pasta.
13. Bake for about 30 minutes or until the top is golden and toasted.

2. What should you do after the sauce has simmered for at least 10 minutes?

- ○ **A.** Add the white pepper and flour.
- ○ **B.** Add the mustard and milk and bring to a simmer.
- ○ **C.** Add the cheddar cheese and half the Parmesan.
- ○ **D.** Melt 1/3 cup of the butter in a saucepan over medium heat and add the onion.

The Future of Aircraft Design

Researchers at NASA are helping aircraft designers build better aircraft. They are studying things like how to make aircraft quieter, lighter, and stronger. Better aircraft designs will help protect the environment. They will use less fuel and make less noise. They will also make it easier for more people to travel faster and farther, without delays.

Most aircraft today are made up of separate parts that are joined together. These parts include the wings, body and tail. Researchers at NASA Langley Research Center are testing new technologies that will help an aircraft change its shape as it flies. This means these parts will no longer be separate. Together, they will form one complete aircraft made from new materials that can change shape, or morph.

A morphing aircraft will fly better because it can change the shape of its wings to suit the air forces around it. Birds use a similar method. They use different feathers to control the way they fly. They also have nerves in their wings that help them know certain things like which way the wind is blowing.

Scientists are studying how to place sensors on aircraft so that they act like nerves. Just as we have nerves in order to feel things with our hands, birds have nerves in their wings. These nerves send signals to the bird's brain that then tell its muscles how hard to flap.

The morphing aircraft will use the same idea. Sensors on aircraft wings will feel the wind and tell the aircraft's muscles the best way to fly. In this case, the muscles are small controls placed all over the aircraft that can move and change the shape of the aircraft. These controls are called actuators.

Sensors, actuators, and tiny computers will make up a central nervous system on the aircraft. This system will tell the aircraft when to change the shape of its wings. That will help the aircraft avoid things like bumpy air, or turbulence. The aircraft's body and wings will be made of new, lighter and more bendable materials. All of these things will help it move more easily through the air. They will also make the aircraft safer and more comfortable to ride.

NASA researchers are studying lots of different aircraft designs. They think about things like what job the aircraft will have to do, how fast it will need to fly and where it will need to go. Some of the other ideas they are testing include aircraft that do not need a pilot, small and easy-to-fly aircraft, and super-fast aircraft.

3. What effect does using sensors, actuators, and tiny computers have on flight?

- ○ **A.** They make up the central nervous system of the aircraft.
- ○ **B.** They will allow the wings to adjust to variations in temperature.
- ○ **C.** They promote the research of aircraft design at NASA.
- ○ **D.** They help the aircraft to change shape to avoid bumpy air or turbulence.

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4. Based on the passage, what is an effect of morphing an aircraft?

- ○ **A.** It easier to morph and change shapes.
- ○ **B.** It uses less fuel and make less noise.
- ○ **C.** It helps to protect the environment.
- ○ **D.** It helps the plane have less air resistance.

Hyper Speed

The four speeds of flight are called the regimes of flight. The regimes of flight are: subsonic, transonic, supersonic and hypersonic.

Vehicles that fly at supersonic speeds are flying faster than the speed of sound. The speed of sound is about 768 miles per hour (1,236 kilometers per hour) at sea level. These speeds are referred to by using Mach numbers. The Mach number is the ratio of the speed of the aircraft to the speed of sound. Flight that is faster than Mach 1 is supersonic. Supersonic includes speeds up to five times faster than the speed of sound, or Mach 5.

In 1947, Air Force Capt. Charles E. "Chuck" Yeager became the first person to fly an aircraft faster than the speed of sound.

The Purpose of Supersonic Research

NASA studies supersonic flight as part of its aeronautics research. Aeronautics is the study of the science of flight. NASA studies flight in support of the nation's air transportation system with the purpose of developing future air and space vehicles.

Learning more about supersonic flight helps NASA design aircraft to perform better at supersonic speeds. It can also help in the design of new vehicles used to explore space. Space vehicles fly at supersonic speeds too.

Rockets like the space shuttle fly at supersonic speeds after liftoff. From about 45 seconds after launch until about two minutes after launch, the shuttle accelerates from Mach 1 to Mach 5.

Launch vehicles fly at hypersonic speeds—greater than Mach 5—while in Earth's upper atmosphere. During atmospheric re-entry, spacecraft slow to supersonic speeds. The space shuttle is flying at supersonic speeds when it reaches the lower part of Earth's atmosphere as it approaches for landing.

The Fastest Aircraft Yet

Today it takes about six hours to fly in a jet airliner from one end of the United States to the other. In the future, it could take only 30 minutes. That is because researchers at NASA are studying new kinds of engines that will help aircraft fly faster.

NASA's X-43A aircraft, nicknamed "Hyper X," is the fastest aircraft ever built. It recently set a world record by flying at 5,000 miles per hour. That is about a mile and a half per second and more than seven times faster than the speed of sound. The Hyper X is therefore hypersonic because it exceeds Mach 5.

Hyper X uses a special engine, called a "scramjet" engine. This engine is similar to the turbo engine used by jets. Turbojet engines use fan blades to squish the air. But this means the engines get too hot at supersonic speeds because the blades can't keep up. When engines get too hot, they will not work properly.

By studying air flow, NASA's experts found ways to make the air travel through the engine at supersonic speeds. Instead of blades, Hyper X has a flat nose designed to suck in air and help squish it at the same time. It is called an "air-breathing" design.

Once the air mixes with fuel and burns, it creates thrust—just like the turbojet engine. However, air-breathing engines will not get too hot.

NASA scientists believe that aircraft like Hyper X will one day be used instead of rockets. That is because scramjet engines can carry more weight. Rockets need heavy oxygen tanks, which limit what else they can carry. Hyper X takes all the oxygen it needs from the air, so it can carry more important things. Also, rockets can only be used once. Hyper X could be used to launch things such as satellites into space, over and over again.

5. What is one effect of space shuttles flying at supersonic speeds after liftoff?

- **A.** They can help save money by reaching the destination quickly.
- **B.** They can slow down from Mach 5 to Mach 1 upon reentry into Earth's atmosphere.
- **C.** They can be easily controlled by the astronauts who are flying the shuttles.
- **D.** They can accelerate from Mach 1 to Mach 5 in under 3 minutes.

About the FBI

Have you ever wanted to work for the FBI? Here is a little history on the Federal Bureau of Investigation.

The FBI started in 1908. It was known as the Bureau of Investigation then. On July 26, 1908, the Attorney General selected ten Special Agents of the Bureau of Investigation. They were called the Special Agent Task Force. In 1933, the Bureau's name was changed to the Division of Investigation. It was changed again in 1935 to the Federal Bureau of Investigation. It is known as that today.

All agents carry a special wallet that has their picture in it. They use this wallet to identify themselves to people when they are working. It is called a credential. There are two different kinds of credentials. They change depending on which division in the FBI you work in and your rank as an agent.

The FBI has changed what they investigate as the times have changed. In 1908, there were different crimes than the crimes that exist today. Also, there were fewer types of crimes than today. A good example of this is car theft. In 1908, almost no one had a car. As more people bought cars, the number of car thefts increased.

Many years ago, the FBI investigated crimes like bank robbery, kidnapping, and car thefts that go across state lines. Today, there are over 350 violations of the law that the FBI investigates. The different violations are broken down into several categories. The FBI looks into violent crime, organized crime, white collar crime, terrorism, foreign counterintelligence, civil rights, and applicant matters.

The FBI has many ways of solving those crimes and finding the criminals. One of them is through fingerprint identification. Fingerprints are a great way to tell people apart because everyone's fingerprints are unique. This means that no two people in the world have the same fingerprints! Other ways of identifying people, like hair color, height, and weight, may change as a person gets older. Fingerprints stay the same no matter what.

There are over 250 million sets of fingerprint records on file. If all the fingerprint cards on file were stacked on top of one another, they would equal 133 stacks, each the size of the Empire State Building! Finding space to keep all of these fingerprint cards is difficult. This is one of the reasons the FBI is now putting cards in a digital format. That means the images can be stored on computers. All fingerprint cards at the FBI are eight-inch squares, a little smaller than a piece of notebook paper, and are thinner than a piece of cardboard. The FBI gets over 37,000 of these fingerprint cards every day, seven days a week! 32% of these cards now come to the FBI as digital images.

Not all fingerprint cards on file are of criminals. Some records are civil prints. Civil prints are taken of people who work for the government or apply for a job with the government.

Still interested in being an agent? Check out the FBI's official website for more information: www.fbi.gov.

adapted from http://www.fbi.gov/kids/k5th/aboutus1.htm

6. What caused the FBI to put more fingerprint cards in a digital format?

- ○ **A.** It was harder to find space on the computers for fingerprint cards.
- ○ **B.** It was harder to find space for hard copies of fingerprint cards.
- ○ **C.** Their computers would not work without digital fingerprint cards.
- ○ **D.** The head of the FBI wanted to look at fingerprints on his computer.

7. What was one effect of more people owning cars?

- **A.** People did not want to steal cars anymore.
- **B.** The FBI did not do any more fingerprints.
- **C.** The FBI stopped driving cars to work.
- **D.** The FBI investigated more car thefts.

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8. Why does the FBI change what they investigate?

- **A.** because the kinds of crimes change as the times and people change
- **B.** because the President makes them change what crimes they investigate
- **C.** because they don't like to investigate the same kind of crime twice
- **D.** because they get bored investigating the same crimes over and over

Candy with a Spark

Ever seen candy that made a spark? By following the following steps, you can see how candy is able to spark.

Ingredients:

- Wint-O-Green Lifesavers
- a plastic sandwich bag
- pliers or nutcrackers
- a dry dark room

Instructions:

- Place the Lifesaver inside the plastic sandwich bag.
- Close your eyes and allow them to adjust to the dark.
- Turn off all the lights. Place a towel at the bottom of the room's door to block out extra light.
- Use the pliers to crush the Lifesaver.
- The candy should give a flash of blue-green light.

A Lifesaver candy is made up of sugar crystals. When the crystals are cracked, they release energy. The energy is an electrical spark. It acts in a very similar way to a lightning bolt. They are both made up of electrons moving through the air. When the electrons smash into other molecules, the reactions creates a spark.

9. Why is the first step to place the candy in a plastic bag?

- ○ **A.** because the rest of the instructions are done in the dark
- ○ **B.** because the candy will go stale if it is out too long
- ○ **C.** because the candy is the most important ingredient
- ○ **D.** because the candy will lose its charge otherwise.

Recycling and Waste

Have you checked your garbage lately? Are you aware that you are throwing away many materials that could be saved?

If we did simple things like reusing glass, we could reduce our municipal landfill sites by almost 10%. Waste cannot be simply thrown away anymore, now it must be managed. Managing our trash is the "in thing," but it is hardly convenient. Let's face the facts, sealed toxins "won't affect us for a good twenty years." But it will affect our children and our children's children. Although this may be true, there are still many advantages to waste management.

Today, more people are in favor of companies who invest in "green products." As a result, companies have removed phosphates, bleaches, and have made their paper products out of recycled papers. At home, families, are saving things, like leftovers, and making sandwiches for the next day. Industries are also manufacturing most of their Christmas cards out of recycled paper, since it takes 20 trees to make a ton of it. Finally, small businesses are doing Christmas tree pickups, and reuse them for preventing erosion in stream beds, and as fertilizer.

Compared to several years ago, people have begun to see that there is a problem. We are beginning to deal with it, but we still have a long way to go.

10. What is the last example the author uses to show support for the idea that recycling is beneficial?

- ○ **A.** Small businesses are doing Christmas tree pickups, and reuse them for preventing erosion in stream beds, and as fertilizer.
- ○ **B.** Families, are saving things, like leftovers, and making sandwiches for the next day.
- ○ **C.** Individuals are saving and recycling glass.
- ○ **D.** Industries are also manufacturing most of their Christmas cards out of recycled paper.

Answers: Individuals, Ideas, and Events

1. D
2. C
3. D
4. D
5. D
6. B
7. D
8. A
9. A
10. A

Explanations: Individuals, Ideas, and Events

1. Look at paragraph 5 in the passage. It says that electrons from the magnetosphere collide with atoms, which then become "excited." This is a cause-effect relationship. Passing electrons collide with atoms (cause), which results in the atoms becoming "excited" (effect).

2. Step 7 instructs you to add the cheddar cheese and half the Parmesan after the sauce has simmered for at least 10 minutes.

3. Scientists are studying how to place equipment like sensors on the aircraft. The sensors and actuators together help the plane to change shape and adjust according to the air force outside. This technology helps the aircraft to avoid turbulence and bumpy air.

4. Morphing an aircraft means to deploy sensors and other equipment to enable it to change the shape of its wings. It helps the plane have less air resistance.

5. As space shuttles fly at supersonic speeds, they are able to accelerate from Mach 1 to Mach 5 in under 3 minutes. In the passage, the author states that "From about 45 seconds after launch until about two minutes after launch, the shuttle accelerates from Mach 1 to Mach 5." This is a result of the shuttles flying at supersonic speeds.

6. Look at paragraph 7. It says, "Finding space to keep all of these fingerprint cards is difficult. This is one of the reasons the FBI is now putting cards in a digital format so that the images can be stored on computers." This is a cause-effect relationship. The FBI put more fingerprint cards in a digital format (effect) because it was harder to find space for the paper fingerprint cards (cause).

7. Look at paragraph 4. It says "As more people bought cars, the number of car thefts increased." Paragraph 5 then says, "...the FBI investigated crimes like bank robbery, kidnapping, and the theft of cars that are taken from one state to another." This shows a cause-effect relationship. As more people bought cars (cause), more cars were stolen (effect). Then as more cars were stolen (cause), the FBI had to investigate more car theft cases (cause).

8. Look at paragraph 4 again. It says "The FBI has changed what they investigate as the times change. In 1908, there were different crimes than those that exist today. Also, there were fewer types of crimes than today." In this cause-effect relationship, the FBI has had to change what crimes they investigate (effect) because the kinds of crimes that happen have changed (cause).

9. Since the rest of the experiment is done in the dark, it makes sense that the first step would be to place the candy in the bag. If not, the person doing the experiment runs the risk of dropping the candy in the dark.

10. If you follow the sequence in the second body paragraph, you'll see that the topic is over how companies are manufacturing "green products" to people who are environmental friendly. Later, the author waits until the last portion of the paragraph to show how small businesses themselves are helping to recycle.

Grade 7 ELA: Argumentative Structure

Curfews: Effective and Fair?

Curfews have wide support from the public, including from law enforcement and government officials. Many parents also support the idea of a government-enforced curfew. These supporters believe that keeping the youth off the streets at night will deter youth-related crime.

However, curfews are not effective at stopping juveniles. First, most of the crimes committed by juveniles happen in the late afternoon when they have free time. Many believe that the crimes committed by juveniles happen at night and that the curfews prevent it. However, this isn't true. Furthermore, a government-required curfew takes control away from parents. Parents should be able to decide what is best for their children, but an enforced curfew takes this power away.

The idea of a curfew assumes that many youths will be committing crimes or participating in unsafe activities. But many young people are trustworthy and do not need an enforced curfew. This only creates tension between law enforcement and juveniles. This could be viewed as a lack of trust between law enforcement, the government, and youths. If a curfew is enforced, the people that put it in place should take all young people into account, not just those they fear will commit crimes or engage in hazardous behavior.

1. Which sentence would be the **best** conclusion to the essay?

- ○ **A.** Curfews are important for communities, and when enforced properly, can create a safer environment for everyone.
- ○ **B.** Curfews may be effective for certain juveniles, but they are not effective for everyone and every problem.
- ○ **C.** Juveniles may get the wrong idea from law enforcement and the government if they enforce a mandatory curfew.
- ○ **D.** Curfews may deter crime, but they will have unintended consequences for law enforcement and parents.

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2. Which sentence would be the **best** introduction to the essay?

- ○ **A.** Curfews, which are supposed to prevent crime, do not result in the intended outcome.
- ○ **B.** Local communities have implemented nightly curfews in order to prevent juvenile crime.
- ○ **C.** Juveniles are still going to commit crimes even when law enforcement puts a curfew in place.
- ○ **D.** Curfews, or specific times one must remain at home, are effective for preventing crime.

Playing a Musical Instrument

(1) Children who learn to play a musical instrument at an early age have some of the best advantages throughout their academic and social lives. **(2)** Oftentimes, children begin showing musical interest at six or seven years old. **(3)** Encouraging musical interests in children at a young age can encourage the self-assurance and mental abilities of students socially and academically. **(4)** It is also critical to note that brain function is highly interactive in students who play musical instruments.

(5) The impact of musical training on children has been known to increase memory and improve reading skills. **(6)** Practicing a musical instrument regularly can help children learn a second language much easier. **(7)** The academic performance of trained musicians is also noted in higher standardized test scores and higher IQs in early adulthood. **(8)** Additionally, music lessons teach students to think outside of their traditional alphabet and number system and teaches them read symbols and signs. **(9)** Over time, these symbols become a cemented language that their brains learn to easily process.

(10) While music instruction in children shows clear evidence of the benefit on academic skills, it also improves and enhances social skills. **(11)** Children who participate in music lessons learn how to work with others harmoniously through the music they create. **(12)** Furthermore, children in these settings also learn the power of both verbal and nonverbal communication. **(13)** They learn how gestures and eye contact also demonstrate a clear form of communication that can be understood. **(14)** Music students also learn the value of self-awareness by becoming comfortable performing in front of others. **(15)** They learn the value of their hard work and build self-confidence by challenging themselves.

(16) The benefits of learning to play a musical instrument at a young age are powerful. **(17)** Some argue that it can be expensive to take private or group lessons, but there are options available today. **(18)** Local libraries, community centers, and youth symphonies make learning to play a musical instrument affordable and accessible, despite income limitations. **(19)** They offer free or reduced-cost lessons and even provide instruments for students to take home and practice with.

(20) Without a doubt, musical instruments are a clear way of grooming young children into successful adults who can show their creativity, intelligence, and wit. **(21)** For some children it comes naturally, while others must work hard to build the skill. **(22)** Regardless where a child is when it comes to skill, the investment lasts a lifetime.

3. Which edit to sentence 18 **best** connects it to sentence 17?

- **A.** Likewise, local libraries, community centers, and youth symphonies make learning to play a musical instrument affordable and accessible, despite income limitations.
- **B.** As a result, local libraries, community centers, and youth symphonies make learning to play a musical instrument affordable and accessible, despite income limitations.
- **C.** For example, local libraries, community centers, and youth symphonies make learning to play a musical instrument affordable and accessible, despite income limitations.
- **D.** Although, local libraries, community centers, and youth symphonies make learning to play a musical instrument affordable and accessible, despite income limitations.

The following is a draft of a student essay. It may contain errors.

To Write or Type?

Most schools have moved away from teaching handwriting and now rely on technology for student assignments. Because students will need to understand how to use technology for writing in college and careers, schools have replaced paper-and-pencil writing with technology. But cursive writing still has many benefits.

Researchers have found that writing in cursive activates students' brains as they write. Writing in cursive reinforces the spelling of words and the construction of sentences and paragraphs. This helps students understand what they are hearing and reading. It also helps students remember the information that they are writing down. This is especially beneficial when students are taking notes in class and must remember information for later use.

The act of writing in cursive also helps improve the motor skills of students. This is really important for young learners, who are still developing their ability to use fine-motor skills. Handwriting of any style is important to this development.

While the ability to use technology for writing is important, it does not have the same artistic and creative style as cursive writing. If students no longer learn to write in cursive, this art could be lost. Many important documents from the past are written in cursive, and if students aren't taught to read and write cursive, they will be unable to understand these culturally important documents.

4. Which sentence would be the **best** introduction to the essay?

- ○ **A.** Not everyone remembers how to write in cursive, but it is important that they learn how so they can be successful.
- ○ **B.** Technology, including computers and tablets, has become the writing tool preferred by schools and employers.
- ○ **C.** Handwriting is a skill that people have used for many years and continues to be the most important skill taught in school.
- ○ **D.** Technology plays an important role in school and work, but handwriting is still a beneficial skill.

Playing a Musical Instrument

(1) Children who learn to play a musical instrument at an early age have some of the best advantages throughout their academic and social lives. **(2)** Oftentimes, children begin showing musical interest at six or seven years old. **(3)** Encouraging musical interests in children at a young age can encourage the self-assurance and mental abilities of students socially and academically. **(4)** It is also critical to note that brain function is highly interactive in students who play musical instruments.

(5) The impact of musical training on children has been known to increase memory and improve reading skills. **(6)** Practicing a musical instrument regularly can help children learn a second language much easier. **(7)** The academic performance of trained musicians is also noted in higher standardized test scores and higher IQs in early adulthood. **(8)** Additionally, music lessons teach students to think outside of their traditional alphabet and number system and teaches them read symbols and signs. **(9)** Over time, these symbols become a cemented language that their brains learn to easily process.

(10) While music instruction in children shows clear evidence of the benefit on academic skills, it also improves and enhances social skills. **(11)** Children who participate in music lessons learn how to work with others harmoniously through the music they create. **(12)** Furthermore, children in these settings also learn the power of both verbal and nonverbal communication. **(13)** They learn how gestures and eye contact also demonstrate a clear form of communication that can be understood. **(14)** Music students also learn the value of self-awareness by becoming comfortable performing in front of others. **(15)** They learn the value of their hard work and build self-confidence by challenging themselves.

(16) The benefits of learning to play a musical instrument at a young age are powerful. **(17)** Some argue that it can be expensive to take private or group lessons, but there are options available today. **(18)** Local libraries, community centers, and youth symphonies make learning to play a musical instrument affordable and accessible, despite income limitations. **(19)** They offer free or reduced-cost lessons and even provide instruments for students to take home and practice with.

(20) Without a doubt, musical instruments are a clear way of grooming young children into successful adults who can show their creativity, intelligence, and wit. **(21)** For some children it comes naturally, while others must work hard to build the skill. **(22)** Regardless where a child is when it comes to skill, the investment lasts a lifetime.

5. Which edit to sentence 6 **best** connects it to sentence 5?

- **A.** At last, practicing a musical instrument regularly can help children learn a second language much easier.
- **B.** Nevertheless, practicing a musical instrument regularly can help children learn a second language much easier.
- **C.** However, practicing a musical instrument regularly can help children learn a second language much easier.
- **D.** As a result, practicing a musical instrument regularly can help children learn a second language much easier.

Ecotourism

Ecotourism is a growing trend that is becoming popular with people who want to travel to remote destinations that have little or no contact with modern society. Ecotourism involves traveling responsibly, in a manner that does not harm the environment.

Some environmentalists may argue that ecotourism can harm protected areas, threatening the delicate balance between humans and animals. Although ecotourism helps tourists visit remote, less-familiar places, it provides them with an opportunity to learn about the different species that live there and to appreciate nature. Tourists also get a first-hand experience about eco-friendly practices. Many countries also encourage ecotourism to fund their conservation programs, which are necessary to maintain fragile ecosystems.

Some researchers may think that the behavior patterns of tourists may influence the local people of these places to adopt modern ways. Although this may be a possibility, ecotourism promotes traditional practices. Handicrafts and locally grown food helps connect the tourists with the locals. It also provides a source of income to the local community. Tourists appreciate the local culture, which in turn motivates the locals to both preserve and take pride in their traditions.

Travelers are willing to travel to remote places and experience untamed nature at its best. Ecotourism combines both enjoyment and active participation to conserve fragile environments.

6. What is an opposing claim in the passage?

- ○ **A.** Locals want to change their traditional practices.
- ○ **B.** Ecotourism provides funds for conservation programs.
- ○ **C.** Ecotourism can damage fragile ecosystems.
- ○ **D.** Countries discourage people from visiting protected areas.

Tablets Versus Textbooks

(1) The business world is becoming more and more digital every day. **(2)** Public education should follow suit and provide students with tablet computers. **(3)** Tablets are handheld devices with screens and controls built into single units. **(4)** Providing students with tablets increases their motivation to learn.

(5) On the other hand, studies show that most students divide their attention between multiple tasks while using digital devices. **(6)** Some teachers and parents are concerned that students will be distracted by games, apps, email, and Web sites while they are supposed to be learning. **(7)** The demands of our fast-paced society require people to multitask. **(8)** Giving students the opportunity to develop this skill will serve them well in the future.

(9) Another advantage of tablets is that they can hold hundreds of textbooks. **(10)** Also, they are lighter and sleeker than textbooks. **(11)** Students who use tablets do not have to carry a backpack full of heavy textbooks. **(12)** Additionally, schools do not need storage space for the e-textbooks.

(13) Furthermore, schools should use tablets because e-textbooks cost less than printed textbooks. **(14)** According to a 2012 report from the Federal Communications Commission (FCC), e-textbooks can save schools a minimum of $250 per student per year. **(15)** Although the initial cost of the tablets may be greater than printed textbooks, the e-textbooks will save districts money in the long run. **(16)** Overall, the benefits of using tablets instead of traditional textbooks are greater than the drawbacks. **(17)** Tablets encourage student learning, reduce the need for storage space, and cut school spending.

7. Choose the best place to add the following sentence.

However, the ability to switch between several tasks is not a negative.

- ○ **A.** after sentence 17
- ○ **B.** after sentence 6
- ○ **C.** before sentence 16
- ○ **D.** after sentence 12

adapted from **It's a Kid's Job: Playing Helps Kids Learn and Grow**
by the National Institutes of Health

(1) "Play is behavior that looks as if it has no purpose," says psychologist Dr. Stephen Suomi. **(2)** "It looks like fun, but it actually prepares [kids] for a complex social world." **(3)** Evidence suggests that play can help boost brain function, increase fitness, improve coordination, and teach cooperation.

(4) Suomi notes that all mammals—from mice to humans—engage in some sort of play. **(5)** His research focuses on rhesus monkeys. **(6)** While he's cautious about drawing parallels between monkeys and people, his studies offer some general insights into the benefits of play.

(7) Active, vigorous social play during development helps to sculpt the monkey brain. **(8)** The brain grows larger. **(9)** Connections between brain areas may strengthen. **(10)** Play also helps monkey youngsters learn how to fit into their social group, which may range from 30 to 200 monkeys in three or four extended families.

(11) Both monkeys and humans live in highly complex social structures, Suomi says. **(12)** "Through play, rhesus monkeys learn to compromise, to deal with strangers, to lose gracefully, to stop before things get out of hand, and to follow rules," he says. **(13)** These lessons prepare monkey youngsters for life after they leave their mothers.

(14) Play may have similar effects in the human brain. **(15)** Play can help lay a foundation for learning the skills we need for social interactions. **(16)** "If human youngsters lack playtime," says Dr. Roberta Golinkoff, an infant language expert at the University of Delaware, "social skills will likely suffer. **(17)** You will lack the ability to control impulses, to switch tasks easily, and to play on your own." **(18)** Play helps young children master their emotions and make their own decisions. **(19)** It also teaches flexibility, motivation, and confidence.

(20) Unstructured, creative, physical play lets children burn calories and develop all kinds of strengths, such as learning how the world works. **(21)** In free play, children choose the games, make the rules, learn to compromise, and release stress. **(22)** "The key is that in free play, kids are making the decisions," says Golinkoff. **(23)** You can't learn to make decisions if you're always told what to do.

8. Why does the writer use the transition word "also" in both sentences 10 and 19?

- ○ **A.** to conclude
- ○ **B.** to add emphasis
- ○ **C.** to provide additional reasons
- ○ **D.** to compare and contrast

The following is a draft of a student essay. It may contain errors.

Are Libraries Still Important?

Just because libraries and librarians have had to change how they function, does not mean they are any less important to students. In the past, students would make their way to the library to simply search for books and resources, but the library structure has changed. It has become more specialized, and often the librarian must travel with materials to the classroom. The librarian shares resources that he or she has selected to match what students are learning.

The role of the librarian is still important. Since many resources and a lot of information is available online, the librarian must help students find information and determine what information is good and what information is not good. The librarian is also able to help students and teachers determine what resources are accessible online, what resources are available in the library, and what resources are best to meet the needs of the student and teacher.

The library is no longer just a place to come check out books. One of the best things about libraries is that they are free! Libraries have become centers for learning. They are used for technology, which is important for people that do not have access to the internet. They can be used as places to meet or to give presentations.

9. Which sentence would be the **best** conclusion to the essay?

- ○ **A.** Sooner or later, the library will end up being open for extended hours to provide essential services.
- ○ **B.** The librarian continues to be one of the best resources available to students, teachers, and the community.
- ○ **C.** The features that have always made libraries useful still exist, yet libraries are changing to meet new needs.
- ○ **D.** The technology available to visitors at most libraries make them an important center of civic life.

The following is a draft of a student essay. It may contain errors.

Stay in School . . . Buildings

Online classes have become more popular. This is especially true for younger children, as many parents are enrolling their elementary and middle school-aged children in online schools and classes. However, online classes have negative consequences for high school students as well.

The high school students who are often enrolled in online classes are those students who need more interaction with teachers. They have typically failed a class and are retaking the class as part of "credit recovery." If a student struggled to master the skills in a regular class, they will most likely struggle to learn the information without direct instruction from a teacher. Many online classes don't offer this.

While people who support online learning believe that taking virtual classes teaches responsibility and independence, the opposite is often the reality. Responsibility and independence are taught traits, and students who are independently learning online rely on parents' or guardians' help. This actually teaches dependence. There is no direct interaction and immediate feedback between teacher and student, which leads to more dependence on the parent or guardian by the student.

Perhaps the biggest loss for students when taking online classes is the social interaction with their peers. When students are alone with a computer, they do not get the social interaction with other students. This also impacts learning, as working with other students can be helpful.

10. Which sentence would be the **best** introduction to the essay?

- ○ **A.** Online classes offer students the opportunity to take classes on the computer, which is a benefit for many students.
- ○ **B.** High school students are using online classes to retake classes while elementary and middle school students use online classes for home schooling.
- ○ **C.** Social interaction with one's peers is the most important aspect of school, and teachers should focus on developing this in the classroom.
- ○ **D.** Online classes promise to be an effective method of teaching and learning, but they have flaws that don't exist in a regular classroom.

Answers

1. B
2. A
3. C
4. D
5. D
6. C
7. B
8. C
9. C
10. D

Explanations

1. A conclusion brings the information in a text together with the author's thoughts. The correct answer, “Curfews may be effective for certain juveniles, but they are not effective for everyone and every problem,” provides the reader with a summary of the text (curfews can be helpful) and provides the writer's conclusion based on the text (but not for everyone).

2. In an argumentative text, a writer presents a claim through the introduction. The correct answer, “Curfews, which are enforced to prevent crime, do not result in the intended outcome,” tells the reader what the text will be about (curfews) and the writer's claim (they do not work).

3. Transition words show the relationship between sentences. The writer wants to indicate that the "local libraries, community centers, and youth symphonies" in sentence 18 are examples of "options available today" in sentence 17. For this reason, the correct answer choice is "For example, local libraries, community centers, and youth symphonies make learning to play a musical instrument affordable and accessible, despite income limitations."

4. In an argumentative text, a writer presents a claim through the introduction. The correct answer, “Technology plays an important role in school and work, but handwriting is still a beneficial skill,” provides the reader with an introduction of what the text will be about (technology and handwriting) and the author’s claim (handwriting is still important).

5. Transition words show the relationship between sentences. The writer wants to show a cause-and-effect relationship, that the details in sentence 6 are a result of the details in sentence 5. For this reason, the correct answer choice is "As a result, practicing a musical instrument regularly can help children learn a second language much easier."

6. An opposing claim goes against what the author believes. In this passage, the author is persuading the readers that ecotourism has many benefits. The author uses the opposing claim that ecotourism may harm protected areas to prove that ecotourism provides funds to increase conservation efforts and raises awareness among tourists. Therefore, the correct answer is "Ecotourism can damage fragile ecosystems."

7. The idea that switching between tasks is not a negative counters the argument that teachers and parents are concerned about students being distracted by games, apps, email, and Web sites. This sentence belongs after sentence 6.

8. Transition words show the relationship between sentences. The writer uses the word "also" in both sentences 10 and 19 to conclude paragraphs 2 and 5 with additional reasons why play is beneficial. Therefore, the correct answer choice is "to provide additional reasons."

9. A conclusion brings the information in a text together with the author's thoughts. The correct answer, “The features that have always made libraries useful still exist, yet libraries are changing to meet new needs,” summarizes the information in the essay (the library still contains resources but has changed) and the author’s understanding of this information (the changes meet people's needs).

10. In an argumentative text, a writer presents a claim through the introduction. The correct answer, “Online classes promise to be an effective method of teaching and learning, but they also have flaws that don’t exist in a regular classroom,” provides an overview of what the essay is about (online classes) and states the author’s claim (online classes have flaws).

Grade 7 ELA: Sentences

1.

Maya Angelou is a mother and grandmother. Maya Angelou is one of the nation's preeminent literary figures.

What is the BEST way to combine the information in the two sentences?

- **A.** Maya Angelou is one of the nation's preeminent mothers and grandmothers.
- **B.** Maya Angelou is a mother, grandmother, is one of the nation's preeminent literary figures.
- **C.** Maya Angelou is a mother and grandmother of one of the nation's preeminent literary figures.
- **D.** Maya Angelou, one of the nation's preeminent literary figures, is a mother and a grandmother.

2.

Tommy and Madison both brought their bowling shoes, but when they got to the lanes Tommy left his in the car.

What is missing from this sentence to make it clearer?

- **A.** a colon after shoes instead of a comma
- **B.** a comma after "Tommy and Madison"
- **C.** a comma after "lanes"
- **D.** Nothing is missing; the sentence is correct.

(1) Hundreds of people line up at Grand Central Terminal yesterday, but they weren't there to catch a train. **(2)** They came to trade in old dollar bills for the new George Washington Presidential $1 coin to New York City's famous railroad station.

(3) By the U.S. Mint the gold-colored coin is the first in a new series. **(4)** The Mint will issue four Presidential $1 coins a year through 2016. **(5)** Presidential $1 coins will come out in the order in which each President served the George Washington coin is the first to be released. **(6)** The new coins is similar to the popular 50 State Quarters program. **(7)** That program issued coins in the order in which each state joins the Union. **(8)** John Adams, Thomas Jefferson, and James Madison coins will come out later this year.

3. What is the best way to rewrite sentence 8?

- **A.** Leave as is.
- **B.** John Adams Thomas Jefferson and James Madison coins will come out later this year.
- **C.** John Adams, Thomas Jefferson, and James Madison later this year coins will come out.
- **D.** John Adams, Thomas Jefferson, and James Madison coin will come out later this year.

Derrick and Melissa had been practicing for the last two weeks, but she still felt like they weren't ready. Their recital was on the 15th. They had both played in the school's band for the last two years. Melissa was a more experienced player.

The days flew by. The worry never disappeared. It was the night before the recital. Melissa paced back and forth. It was her bedtime. She wasn't ready to sleep. All of the notes seemed to drift from her head like steam from a smokestack. She wondered if Derrick was as nervous. She thought about the crowd, and it made things worse.

4. She thought about the crowd, and it made things worse.

Without changing the meaning, what is the best way to change this compound sentence into two simple sentences?

- **A.** She thought about. The crowd it made things worse.
- **B.** She thought. About the crowd it made things worse.
- **C.** She thought about the crowd. It made things worse.
- **D.** She thought about the crowd it made. Things worse.

5.

Very young children should have their exposure to sunlight limited. Or they should wear protective sunglasses.

What is the BEST way to combine the information above?

- **A.** Very young children should have their exposure to sunlight limited, and or they should wear protective sunglasses.
- **B.** Very young children should have their exposure to sunlight limited, they should wear protective sunglasses.
- **C.** Very young children should have their exposure to sunlight limited, or they should wear protective sunglasses.
- **D.** Very young children should have their exposure to sunlight limited; or they should wear protective sunglasses.

6.

Maya Angelou has been respected as an important American writer. Since her poetry was first published.

What is the BEST way to combine the information above?

- **A.** Maya Angelou has been respected as an important American writer; since her poetry was first published.
- **B.** Maya Angelou has been respected as an important American writer since, her poetry was first published.
- **C.** Maya Angelou has been respected as an important American writer since her poetry was first published.
- **D.** Maya Angelou has been respected as an important American writer, since her poetry, was first published.

7.

> While walking to his next class Jeremy had tripped over his shoes and dropped his books all over the floor.

What is missing from this sentence?

- **A.** an apostrophe after the word "books"
- **B.** a comma after the word "class"
- **C.** Nothing is missing; the sentence is correct.
- **D.** a comma before the word "and"

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8. The days flew by. The worry never disappeared.

Without changing the meaning, what is the best way to change these simple sentences into one compound sentence?

- **A.** The days flew by but the worry never disappeared.
- **B.** As the days flew by but the worry never disappeared.
- **C.** The days flew by, but the worry never disappeared.
- **D.** The days flew by and the worry never disappeared.

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(1) Hundreds of people line up at Grand Central Terminal yesterday, but they weren't there to catch a train. **(2)** They came to trade in old dollar bills for the new George Washington Presidential $1 coin to New York City's famous railroad station.

(3) By the U.S. Mint the gold-colored coin is the first in a new series. **(4)** The Mint will issue four Presidential $1 coins a year through 2016. **(5)** Presidential $1 coins will come out in the order in which each President served the George Washington coin is the first to be released. **(6)** The new coins is similar to the popular 50 State Quarters program. **(7)** That program issued coins in the order in which each state joins the Union. **(8)** John Adams, Thomas Jefferson, and James Madison coins will come out later this year.

9. What is the best way to rewrite sentence 1?

- **A.** Hundreds of people line up at Grand Central Terminal yesterday, but they weren't their to catch a train.
- **B.** Hundreds of people lined up at Grand Central Terminal yesterday, but they weren't there too catch a train.
- **C.** Leave as is.
- **D.** Hundreds of people lined up at Grand Central Terminal yesterday, but they weren't there to catch a train.

10.

Because your eyes are so important. You must take care of them.

What is the BEST way to combine the information above?

- **A.** Because your eyes are so important, then you must take care of them.
- **B.** Because your eyes are so important that you must take care of them.
- **C.** Because your eyes are so important, and you must take care of them.
- **D.** Because your eyes are so important, you must take care of them.

Answers: Sentences

1. D
2. C
3. A
4. C
5. C
6. C
7. B
8. C
9. D
10. D

Explanations: Sentences

1. The second sentence adds that Angelou is a preeminent literary figure. This information can be added as an appositive to the first sentence. The appositive is nonessential and should be set off by commas.

2. A comma should be placed after the word lanes because "when they got to the lanes" is an introductory clause for the second independent clause "when they got to the lanes Tommy left his in the car." The first independent clause is "Tommy and Madison both brought their bowling shoes" and both independent clauses are joined by a comma and the coordinating conjunction "but."

3. Nothing is wrong with the structure of this sentence. The subject and verb agree, the modifier is placed correctly, and commas appear after each president in the list.

4. This is a compound sentence. Compound sentences are made up of two or more independent clauses. In this case, splitting up the independent clauses changes them into two simple sentences.

5. The clause *Or they should wear protective sunglasses* is an independent clause. When two independent clauses are joined by a coordinating conjunction (and, but, or, nor, for, so, yet), add a comma before the coordinating conjunction.

6. The clause *Since her poetry was first published* is a dependent clause. It has a subject, *poetry*, and a verb phrase, *was published*, but it begins with a subordinating conjunction, *since*. The two should be joined, and no comma is necessary because the dependent clause follows the independent clause.

7. There should be a comma after the word "class" because "While walking to his next class" is an introductory phrase (a dependent clause). For it to be recognized in the sentence, it needs a comma. It should read this way: "While walking to his next class, Jeremy had tripped over his shoes and dropped his books all over the floor."

8. These are simple sentences. To change the simple sentences into a compound sentence, add a comma and a coordinating conjunction in between both independent clauses.

9. The problem with the first sentence is that there is an error in the verb tense. The action took place in the past, as evidenced by the word "yesterday," but the verb "line" is in the present tense. It should be written in the past tense.

10. The clause *Because your eyes are so important* is a dependent clause. It has a subject, *eyes*, and a verb, *are*, but it begins with a subordinating conjunction, *because*. The two should be joined, and a comma is necessary because the dependent clause comes at the beginning of the sentence.

Grade 7 ELA: Punctuation

1.

The small furry puppy grew so fond of Sean that it followed him everywhere.

What is the **best** way to rewrite this sentence?

- **A.** The small, furry puppy grew so fond of Sean that it followed him everywhere.
- **B.** The small, furry, puppy grew so fond of Sean that it followed him everywhere.
- **C.** The small, furry, puppy, grew so fond of Sean that it followed him everywhere.
- **D.** The small furry, puppy, grew so fond of Sean that it followed him everywhere.

---

2. Which sentence is punctuated correctly?

- **A.** Molly was looking forward to tasting the delicious, creamy cake her mom had baked.
- **B.** Molly's mom baked a delicious cake with chocolate chips, and strawberry frosting.
- **C.** Molly wanted to bake a special, strawberry and chocolate cake for Mom's birthday.
- **D.** Molly put a spoonful of cake in her mouth and thought it was extremely, delicious.

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3. Which of these sentences uses commas correctly?

- **A.** The seniors juniors sophomores and freshman all have to be at school by eight.
- **B.** My favorite books are romance novels, fairy tales magazines, and mysteries.
- **C.** We had meatloaf, mashed potatoes, green beans, and rolls for dinner.
- **D.** I have decided to wear, my purple dress, silver, shoes and matching bag.

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4. Which sentence is punctuated correctly?

- **A.** In the long run, one bad haircut doesn't seem so bad.
- **B.** In the long run one, bad haircut doesn't seem so bad.
- **C.** In the long run one, bad haircut doesn't, seem so bad.
- **D.** In, the long run, one bad haircut, doesn't seem so bad.

5.

We had to take slippery narrow trails to reach the top of the mountain.

What is the **best** way to rewrite this sentence?

- **A.** We had to take narrow slippery, trails, to reach the top of the mountain.
- **B.** We had to take narrow slippery trails, to reach the top of the mountain.
- **C.** We had to take narrow, slippery trails to reach the top of the mountain.
- **D.** We had to take narrow, slippery, trails to reach the top of the mountain.

---

6. Which sentence is punctuated correctly?

- **A.** There were only three questions left when the teacher said, "Okay pencils down".
- **B.** There were only three questions left when the teacher said "Okay pencils down".
- **C.** There were only three questions left when the teacher said "Okay, pencils down."
- **D.** There were only three questions left when the teacher said, "Okay, pencils down."

7.

The bouquet had beautiful fragrant flowers of different colors.

What is the **best** way to rewrite this sentence?

- **A.** The bouquet had beautiful fragrant flowers, of different colors.
- **B.** The bouquet had beautiful, fragrant flowers of different colors.
- **C.** The bouquet had beautiful, fragrant, flowers of different colors.
- **D.** The bouquet had beautiful fragrant, flowers, of different colors.

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8. Which sentence is punctuated correctly?

- **A.** After running the marathon in record time Julia wanted to sleep for the rest of the day.
- **B.** After running, the marathon in record time, Julia wanted to sleep for the rest of the day.
- **C.** After running the marathon in record, time, Julia wanted to sleep for the rest of the day.
- **D.** After running the marathon in record time, Julia wanted to sleep for the rest of the day.

9. These shoes look nice, and they are also very comfortable.

In order to be punctuated correctly, how must the sentence above be rewritten?

- **A.** These shoes look nice and they are also, very comfortable.
- **B.** These shoes look nice, and they are, also very, comfortable.
- **C.** These shoes look nice, and, they are also very comfortable.
- **D.** This sentence is punctuated correctly and does not need to be rewritten.

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10. "What we can confirm is that talks are going on", Konstantin Kreidenko, a spokesman for the Russian Aviation and Space Agency, told Reuters on Tuesday.

In order to be punctuated correctly, how must the sentence above be rewritten?

- **A.** "What we can confirm is that talks are going on," Konstantin Kreidenko, a spokesman for the Russian Aviation and Space Agency, told Reuters on Tuesday.
- **B.** "What we can confirm is that talks are going on" Konstantin Kreidenko, a spokesman for the Russian Aviation and Space Agency, told Reuters on Tuesday.
- **C.** "What we can confirm is that talks are going on", Konstantin Kreidenko a spokesman for the Russian Aviation and Space Agency, told Reuters on Tuesday.
- **D.** This sentence is punctuated correctly and does not need to be rewritten.

Answers

1. A
2. A
3. C
4. A
5. C
6. D
7. B
8. D
9. D
10. A

Explanations

1. The correct answer uses a comma to separate the coordinate adjectives "small" and "furry." Coordinate adjectives have equal importance when modifying the same noun. To determine if the adjectives are coordinate adjectives, replace the comma with "and." If the phrase makes sense, then you have coordinate adjectives. Another way is to reverse the order of the adjectives to see if they still make sense.

2. The correct answer uses a comma to separate the coordinate adjectives "delicious" and "creamy." Coordinate adjectives have equal importance when modifying the same noun. To determine if the adjectives are coordinate adjectives, replace the comma with "and." If the phrase makes sense, then you have coordinate adjectives. Another way is to reverse the order of the adjectives to see if they still make sense.

3. When writing a list, commas should be used to separate the items in it and before the coordinating conjunction. The other answer choices either have too many commas, no commas at all, or are missing a comma where there should be one.

4. Use a comma to set off an introductory phrase. The correct sentence should have a comma after the introductory phrase "In the long run."

5. The correct answer uses a comma to separate the coordinate adjectives "narrow" and "slippery." Coordinate adjectives have equal importance when modifying the same noun. To determine if the adjectives are coordinate adjectives, replace the comma with "and." If the phrase makes sense, then you have coordinate adjectives. Another way is to reverse the order of the adjectives to see if they still make sense.

6. The correct answer should have quotation marks around what the teacher said. To introduce the quote, a comma should be before the opening quotation mark. A comma also belongs after the introductory word inside of the quote ("Okay"). A period that ends the sentence should always go inside of the quotation marks.

7. The correct answer uses a comma to separate the coordinate adjectives "beautiful" and "fragrant." Coordinate adjectives have equal importance when modifying the same noun. To determine if the adjectives are coordinate adjectives, replace the comma with "and." If the phrase makes sense, then you have coordinate adjectives. Another way is to reverse the order of the adjectives to see if they still make sense.

8. Use a comma to set off an introductory phrase. The correct sentence should have a comma after the introductory phrase "After running the marathon in record time."

9. "These shoes look nice" is one independent clause. "They are also very comfortable" is another independent clause. A comma must be placed before a coordinating conjunction (*and*) that joins two independent clauses. This sentence is correct as it is written.

10. The comma after a direct quote must be placed inside the ending quote marks.