10th Grade
Worksheet Bundle

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Study Island 10th Grade Reading - Connotation and Denotation

Question 1 .

Which of these words has the **most** positive connotation?

- **A.** frightening
- **B.** sinister
- **C.** menacing
- **D.** foreboding

Question 2 .

Konstantin faced an epic battle against time in order to finish his research paper, drop off his library books, and make it to his part-time job.

What is the connotative meaning of the word "epic" as used in this sentence?

- **A.** unusual
- **B.** lengthy
- **C.** difficult
- **D.** disordered

Question 3 .

The words hit, strike, thump, and smite all have similar meanings. Which word would an author use to show the strongest connotation?

- **A.** smite
- **B.** hit
- **C.** thump
- **D.** strike

Question 4 .

So now Della's beautiful hair fell about her, rippling and shining like a cascade of brown waters. It reached below her knee and made itself almost a garment for her. And then she did it up again nervously and quickly. Once she faltered for a minute and stood still while a tear or two splashed on the worn red carpet.

On went her old brown jacket; on went her old brown hat. With a whirl of skirts and with the brilliant sparkle still in her eyes, she cluttered out of the door and down the stairs to the street.

from "The Gift of the Magi" by O. Henry

Read the following sentence from the passage.

"With a **whirl** of skirts and with the brilliant sparkle still in her eyes . . ."

What is the dictionary meaning of the word **whirl**?

- **A.** a world
- **B.** a turn
- **C.** a transport
- **D.** a wall

Question 5 .

Renewable Energy

Turning on your computer or charging your cell phone requires electricity. To produce electricity people must harness power from an energy source. Coal burning power plants and nuclear fission reactors are two popular methods for producing electricity. Although these energy sources can produce ample electricity for consumption, coal power plants and nuclear fission reactors have notable problems, however. As with all fossil fuels, burning coal creates air pollution and greenhouse gases that add to the planet's global warming problem. Even though nuclear fission reactors only produce steam and no air pollution, these power plants do create physical nuclear waste that is difficult to dispose of. So, how do people solve their energy needs without polluting the planet?

One of the most promising forms of energy production comes from renewable energy sources. Renewable energy refers to the harnessing of energy from systems that naturally replenish over time. Solar power and wind power are two well-known examples of renewable energy, but renewable energy comes in many forms. For example, geothermal energy harnesses the energy produced from geysers and geothermal vents; tidal energy harnesses the power produced by ocean tides.

Nevertheless, renewable energy sources do have their limits. Unlike certain nonrenewable energy sources, such as fossil fuels or nuclear, location is extremely important for renewable energy sources. For instance, solar power can't produce much electricity in regions that experience heavy cloud cover, and wind power cannot produce electricity in areas without wind. Also, powering even a small town often requires many wind turbines or solar panels. These points are important to weigh as people seek to address future energy concerns.

Renewable energy sources are promising because these systems produce electricity without creating much pollution. As humanity's need for electricity continues to grow, renewable energy could play a crucial role in the future.

Directions: Select all the correct answers.

Which words have a similar denotation to the word replenish as it is used in the passage?

- [ ] rekindle
- [ ] regenerate
- [ ] reinforce
- [ ] refresh
- [ ] redevelop

Question 6 .

Cappadocia

Cappadocia, a region in Anatolia in central Turkey, is known for its dramatic landscape scattered with unique rock formations. Over the years, forces of nature such as wind and rain have caused the volcanic rock of this region to take the shape of cones, pillars, towers, and "fairy chimneys," making the landscape look like something out of a fairytale. Humans have also built caves into the rock, which contain fine examples of Byzantine art.

Göreme National Park in Cappadocia is a World Heritage Site. People can visit the park to enjoy the stunning rock formations and to get a glimpse into the rich history of the region. Visitors can explore the towns nearby, or they can even cycle through the rocky terrain of Cappadocia. The hot air balloon ride over the landscape also entices people to visit the region and enjoy a bird's eye view of the valleys below.

Read the following sentence from the passage.

Cappadocia, a region in Anatolia in central Turkey, is known for its dramatic landscape scattered with unique rock formations.

What is the connotation of the word **dramatic** in the sentence?

- **A.** complex
- **B.** messy
- **C.** rocky
- **D.** striking

Question 7 .

The words traditional, conservative, conventional, and old-fashioned all have similar meanings. Which one would an author use to express a negative opinion about a person?

- **A.** old-fashioned
- **B.** traditional
- **C.** conservative
- **D.** conventional

Question 8 .

Homecoming

by A. Gautam

I was off to see my father past the fog and the mist.
The newspaper crumpled in my fist,
and frost lay like stardust on my shoulders.
My feet trembled against the icy floor.

I was off to meet my father at the train station.
Our photograph was warm in my coat pocket.
The bench was cold like a broken friendship.
The engine whizzed past my reddish ears.

I was off to find my father among the happy faces—
and people swarmed as bees attacking a stone
that had just flung past their wounded hive.
Then, he appeared like the sun peeping through the clouds.

My father—finally home—in my arms—melted the winter.
He returned—whole—after all these years
and gave life to my photograph—
now, warmer than all summers of my lifetime.

In the second stanza, the description "cold like a broken friendship" suggests that the bench was

- **A.** hazardous to the speaker.
- **B.** lacking in human affection.
- **C.** covered in ice and snow.
- **D.** located in an outdoor area.

Question 9 .

"Jordan!" Misty screamed across the hall as she ran towards her friend. "Can you believe this? After three months of rehearsals, opening night is finally here!"

"It is pretty cool!" Jordan replied. She sneaked a peek through the closed curtains and said, "The set is so Hollywood. Getting help from Mrs. Kramer's art class was one of the best ideas Ms. Jones had this year." Misty nodded her head in approval. "This is going to be the best production of *The Sound of Music* ever!" Jordan exclaimed.

Misty turned on her heels and shouted as she walked away, "I better go and review my lines one more time before curtain call."

"Break a leg, Misty. I'll be in the sound booth working my magic," Jordan said.

The set is so Hollywood.

In this sentence from the passage, the word Hollywood refers to

- **A.** a motion-picture film background.
- **B.** the professional look of the set.
- **C.** the name of the production.
- **D.** a setting in southern California.

Question 10 .

My Baby Sister

by A. Gautam

Fresh like morning dew
On a new leaf that has just sprung
After the longest winter
She rests on the leaf of the blanket
—pink as her soft cheeks
And blossoms in her sleep
Unaware of the world that has turned
Upside down because of her
And only for her

Read the following line from the poem.

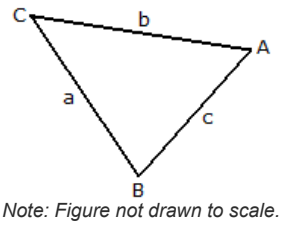
"Fresh like morning dew"

The speaker uses the connotative meaning of "fresh" to mean

- **A.** highly fashionable.
- **B.** newly arrived.
- **C.** not decayed.
- **D.** full of attitude.

Study Island 10th Grade Geometry - Law of Sines and Law of Cosines

Question 1 .



Note: Figure not drawn to scale.

In the triangle shown above, m∠A = 49°, *b* = 14 m, and *c* = 20 m. What is the approximate length of side a?

- **A.** 228.61 m
- **B.** 24.39 m
- **C.** 15.12 m
- **D.** 20.31 m

Question 2 .

The law of sines states that if ABC is a triangle with sides a, b, and c, then the following is true.

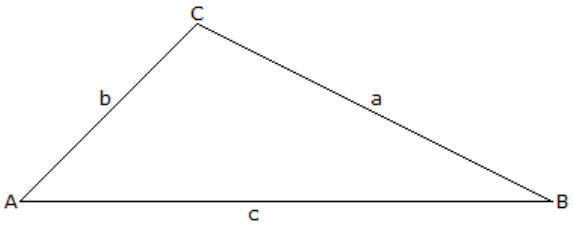
$$\frac{a}{\sin(A)} = \frac{b}{\sin(B)} = \frac{c}{\sin(C)}$$

In order to prove the law of sines, what must first be constructed in triangle ABC?

- **A.** a median of triangle ABC
- **B.** a perpendicular bisector of triangle ABC
- **C.** an altitude of triangle ABC
- **D.** an angle bisector of triangle ABC

Question 3 .

The law of cosines can be proved using the Pythagorean theorem.



Given triangle ABC, which statement below correctly uses the Pythagorean theorem in the proof of the law of cosines?

- **A.** $a^2 = (b \sin(A))^2 + (b \cos(A))^2$
- **B.** $a^2 = (b \cos(A))^2 + (c - b \cos(A))^2$
- **C.** $a^2 = (b \sin(A))^2 + (c + b \cos(A))^2$
- **D.** $a^2 = (b \sin(A))^2 + (c - b \cos(A))^2$

Question 4 .

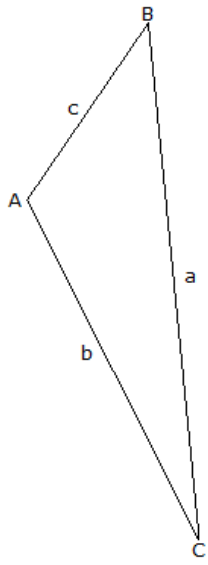
Directions: Select all the correct answers.

Rick, John, and Kevin are playing catch. Rick throws the ball to John, John throws the ball to Kevin, and Kevin throws the ball to Rick. John knows that the distance between him and Rick is 20 yards and the distance between him and Kevin is $20\sqrt{3}$ yards. He also knows that the angle created between Rick, himself, and Kevin has a measure of 30°.

Which person is making the shortest throw?

- Rick
- John
- Kevin
- It is impossible to know.

Question 5 .

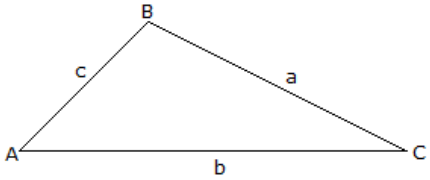


Note: Figure not drawn to scale.

In the triangle shown above, m∠A = 108°, m∠C = 24°, and *a* = 46 ft. What is the approximate length of side b?

- **A.** 35.94 ft
- **B.** 58.87 ft
- **C.** 31.13 ft
- **D.** 1.38 ft

Question 6 .



Note: Figure not drawn to scale.

In the triangle shown above, *a* = 11 in, *b* = 14 in, and *c* = 7 in. What is the approximate measure of angle A?

- **A.** 39.25°
- **B.** 50.75°
- **C.** 99.72°
- **D.** 29.53°

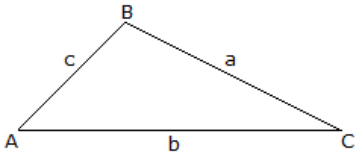
Question 7 .

Two forces acting on an object form a 60° angle. Force A is 30 pounds, force B is 20 pounds, and the resultant force is approximately 44 pounds.

What is the measure of the angle formed by the resultant force and force B? (Round to the nearest degree.)

- **A.** 84°
- **B.** 36°
- **C.** 23°
- **D.** 42°

Question 8 .

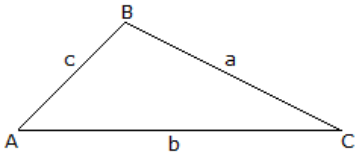


Note: Figure not drawn to scale.

In the triangle shown above m∠B = 108°, m∠A = 50°, and *b* = 13 in. What is the approximate length of side c?

- **A.** 2.7 in
- **B.** 33 in
- **C.** 5.12 in
- **D.** 7.63 in

Question 9 .

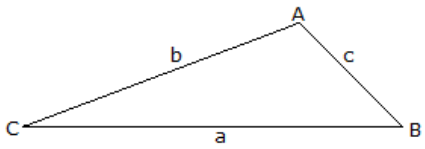


Note: Figure not drawn to scale.

In the triangle shown above m∠A = 41°, m∠C = 28°, and *a* = 15 in. What is the approximate length of side b?

- **A.** 24.21 in
- **B.** 18.87 in
- **C.** 10.54 in
- **D.** 21.35 in

Question 10 .



Note: Figure not drawn to scale.

In the triangle shown above, m∠B = 43°, *a* = 36 cm, and *c* = 18 cm. What is the approximate length of side b?

- **A.** 25.93 cm
- **B.** 672.17 cm
- **C.** 33.85 cm
- **D.** 40.23 cm