Geometry
Daily Quiz 10162019

Question 1.

The ratio of the volumes of two cubes is 1:64. What is the ratio of the edge lengths of the two cubes?

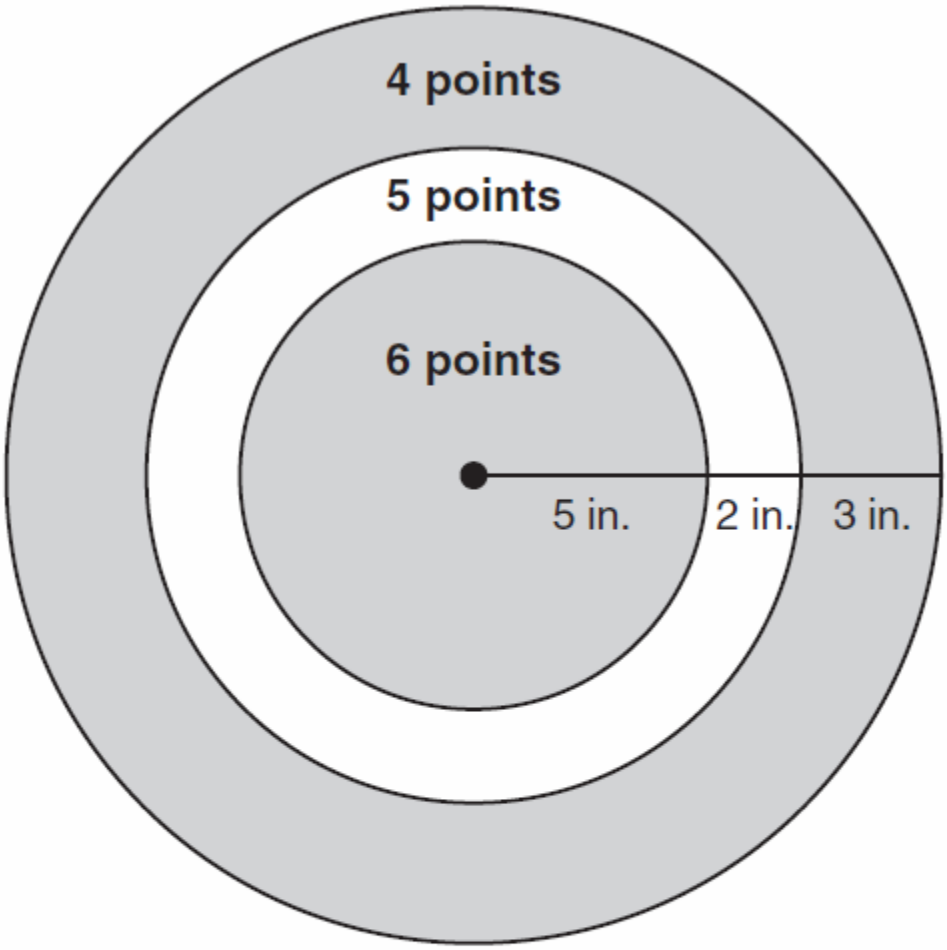
A. 1:4

B. 1:8

C. 1:16

D. 1:64

Question 2. ❷ Look at this target.



Which expression represents the area, in square inches, of the section of the target that is labeled "4 points"?

A. $3^2\pi$

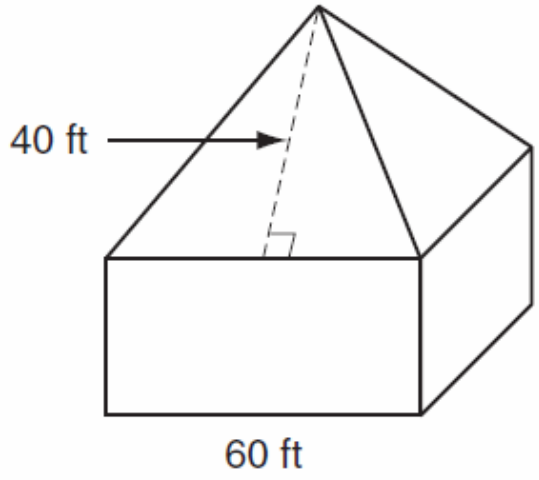
B. $10^2\pi$

C. $(7^2 - 3^2)\pi$

D. $(10^2 - 7^2)\pi$

Question 3.

3 A diagram of a building is shown.



not drawn to scale

The building has a roof in the shape of a square pyramid. The slant height of the roof is 40 ft. What is the total surface area of the roof?

A. 9600 ft^2

B. 8400 ft^2

C. 4800 ft^2

D. 2400 ft^2

Question 4.

Quadrilateral $PQRS$ has vertices at these coordinates.

- P (6, 5)
- Q (2, 4)
- R (4, 0)
- S (7, 1)

Which statement is true?

A. $\overline{PQ}$ is parallel to $\overline{RS}$.

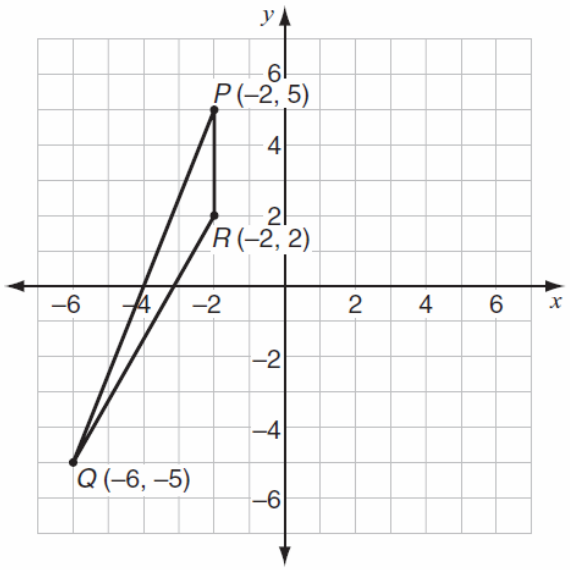
B. $\overline{PQ}$ is perpendicular to $\overline{PS}$.

C. $\overline{QR}$ is parallel to $\overline{PS}$.

D. $\overline{QR}$ is perpendicular to $\overline{RS}$.

Question 5.

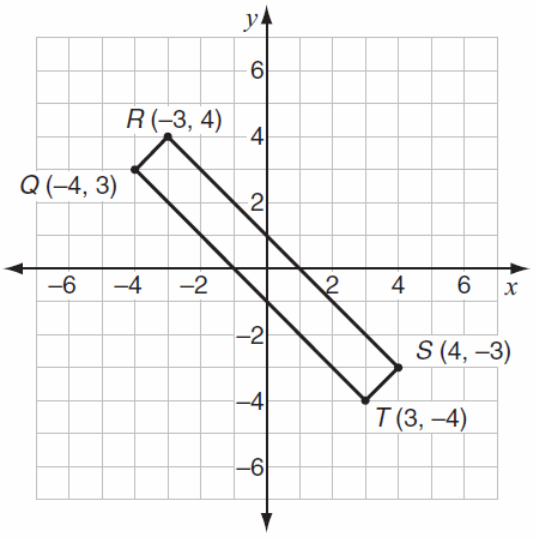
Look at triangle PQR on the grid below.



What are the coordinates of the image of point Q after triangle PQR is reflected over line PR?

Question 6.

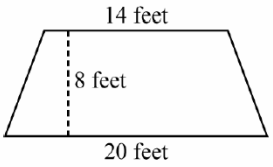
Look at rectangle $QRST$.



What is the perimeter, in units, of rectangle $QRST$? Show your work or explain how you know.

Question 7.

Lina is covering a wall in her attic with wallpaper. The wall is trapezoid-shaped with top and bottom bases of 14 feet and 20 feet. The height of the wall is 8 feet. How much wallpaper will she need to cover the wall?



a. 24 square feet

b. 48 square feet

c. 136 square feet

d. 272 square feet

Question 8.

A bell tower is 17 meters tall. It casts a long shadow on the ground below. The tip of the shadow of the bell tower is 51 meters from the base of the bell tower. At the same time, a tall elm tree casts a shadow that is 63 meters long. If the right triangle formed by the tower and its shadow is similar to the right triangle formed by the elm and its shadow, how tall is the elm to the nearest tenth?

a. 13.8 meters

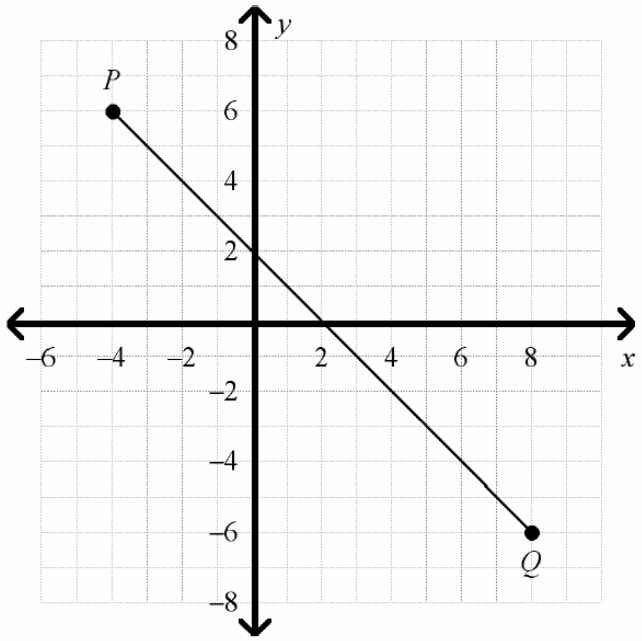
b. 21 meters

c. 189 meters

d. 3.7 meters

Question 9.

What is the midpoint of $\overline{PQ}$?

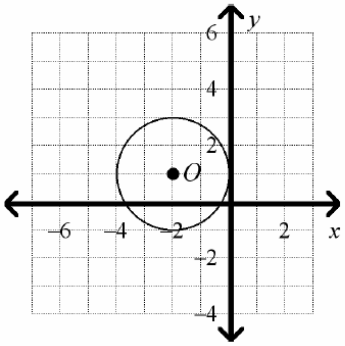


a. (2, 0) b. (2, 1) c. (1, 1) d. (1, 0)

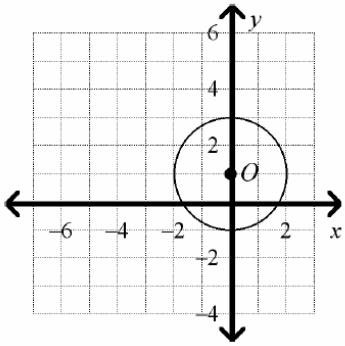
Question 10.

A manufacturer is designing a two-wheeled cart that can maneuver through tight spaces. On one test model, the wheel placement (center) and radius is modeled by the equation $(x + 2)^2 + (y - 1)^2 = 4$. What is the graph that shows the position and radius of the wheels?

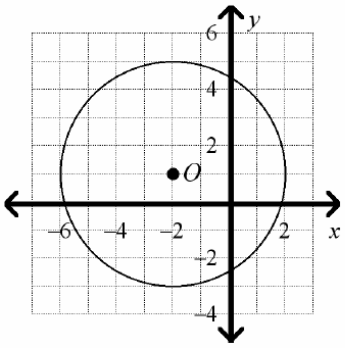
a.



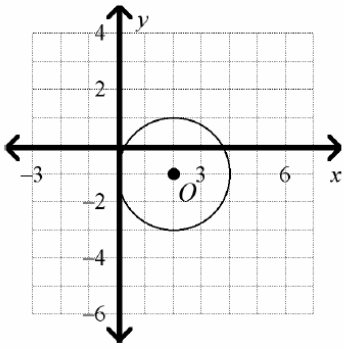
c.



b.



d.



Bonus Question.

The equation $x^2 - 8x + y^2 = 9$ defines a circle in the xy-coordinate plane. What is the radius of the circle?

Enter your answer in the box.

PARCC
Partnership for Assessment of Readiness for College and Careers

High School Mathematics Assessment Reference Sheet

1 inch = 2.54 centimeters
1 meter = 39.37 inches
1 mile = 5280 feet
1 mile = 1760 yards
1 mile = 1.609 kilometers

1 kilometer = 0.62 mile
1 pound = 16 ounces
1 pound = 0.454 kilograms
1 kilogram = 2.2 pounds
1 ton = 2000 pounds

1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts
1 gallon = 3.785 liters
1 liter = 0.264 gallons
1 liter = 1000 cubic centimeters

Triangle	$A = \frac{1}{2}bh$
Parallelogram	$A = bh$
Circle	$A = \pi r^2$
Circle	$C = \pi d \ \ or \ \ C = 2\pi r$
General Prisms	$V = Bh$
Cylinder	$V = \pi r^2 h$
Sphere	$V = \frac{4}{3}\pi r^3$
Cone	$V = \frac{1}{3}\pi r^2 h$
Pyramid	$V = \frac{1}{3}Bh$

Quadratic Formula	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Arithmetic Sequence	$a_n = a_1 + (n-1)d$
Geometric Sequence	$a_n = a_1 r^{n-1}$
Geometric Series	$S_n = \frac{a_1 - a_1 r^n}{1-r}$ where $r \neq 1$
Radians	1 radian $= \frac{180}{\pi}$ degrees
Degrees	1 degree $= \frac{\pi}{180}$ radians

PA00003145

942260 1 2 3 4 5 A B C D E Printed in the USA ISD10957