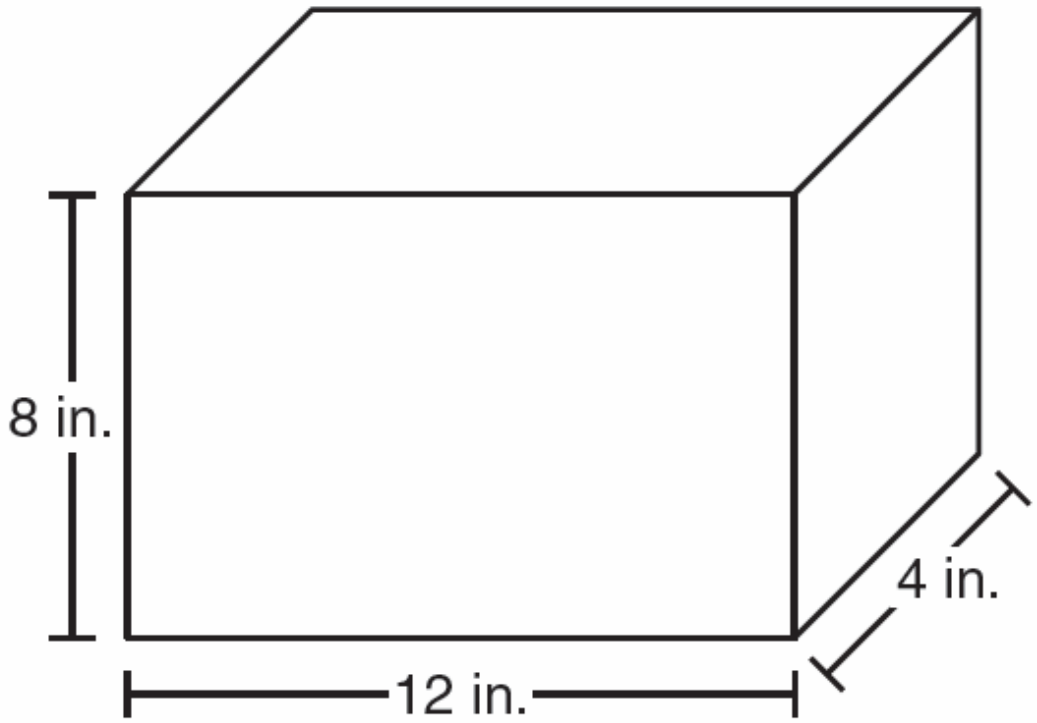
Geometry
Daily Quiz 10232019
This may be an easy 100!

Question 1.

Look at this rectangular prism.



What could be the dimensions of a rectangular prism that is similar to this rectangular prism?

A. 6 in., 2 in., 1 in.

B. 9 in., 6 in., 3 in.

C. 15 in., 11 in., 7 in.

D. 24 in., 8 in., 4 in.

Question 2.

This table shows the perimeters, in inches, of rectangles with different widths.

Width (in.)	Perimeter (in.)
1	$6x + 4$
2	$6x + 6$
3	$6x + 8$
4	$6x + 10$
5	$6x + 12$

Based on the table, what is the width of a rectangle with a perimeter of $6x + 50$ inches?

A. 24 inches

B. 25 inches

C. 40 inches

D. 47 inches

Question 3.

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 $\overline{RS}$.

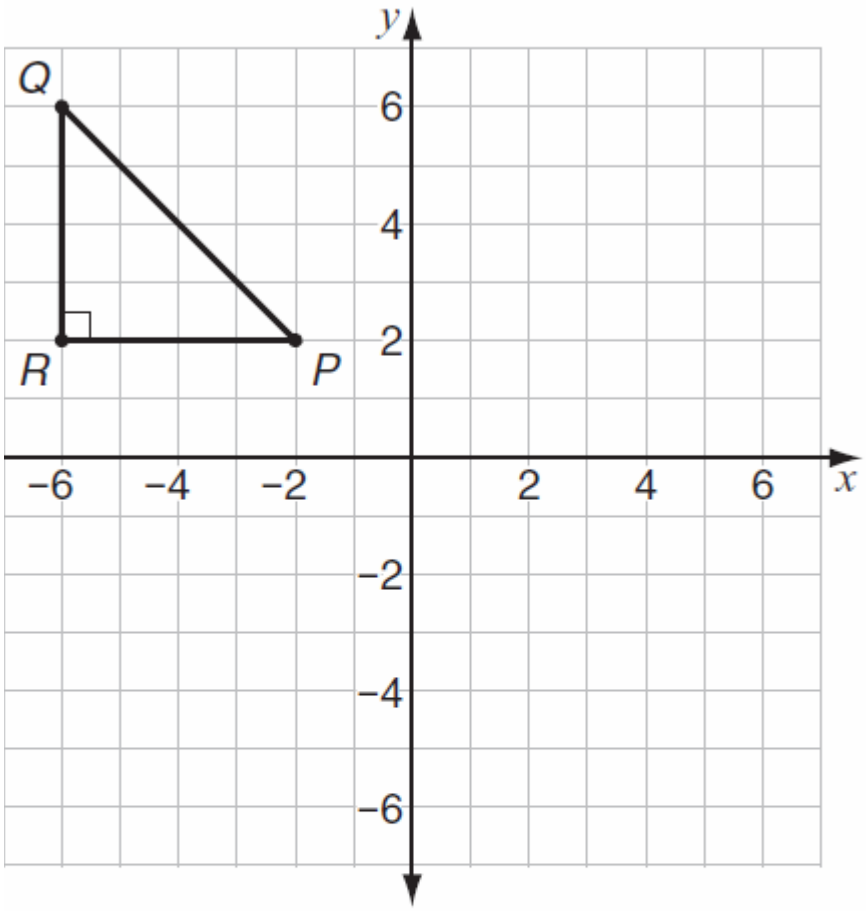
B. $\overline{PQ}$ is perpendicular to $\overline{PS}$.

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

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

Question 4.

Look at ΔPQR on this grid.



What are the coordinates of the image of point R after a 90° counterclockwise rotation about the origin?

A. (–6, –2)

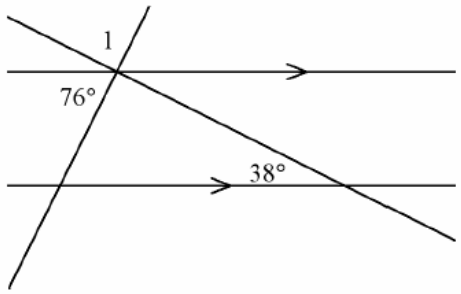
B. (–2, –6)

C. (6, –2)

D. (6, 2)

Question 5.

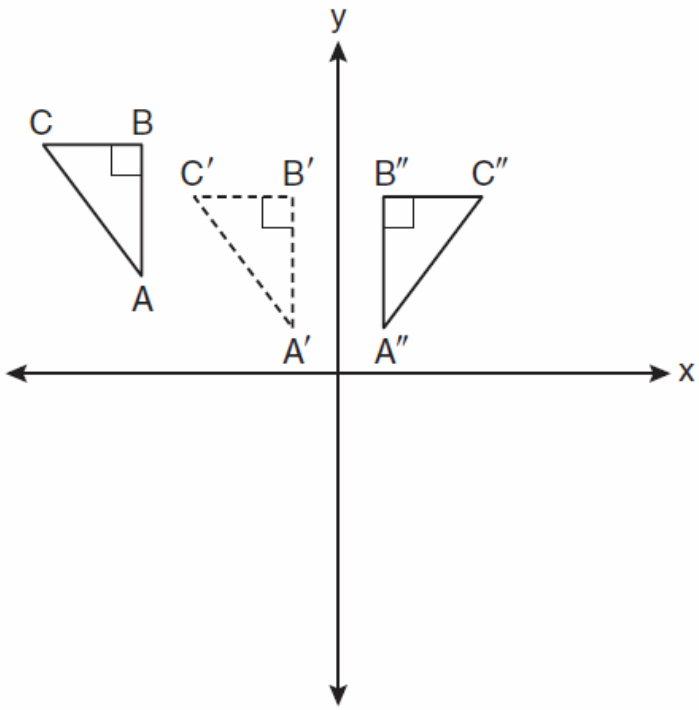
What is $m\angle 1$?



a. 114° b. 104° c. 76° d. 66°

Question 6.

In the diagram below, $\triangle A'B'C'$ is a transformation of $\triangle ABC$, and $\triangle A''B''C''$ is a transformation of $\triangle A'B'C'$.



The composite transformation of $\triangle ABC$ to $\triangle A''B''C''$ is an example of a

(1) reflection followed by a rotation

(2) reflection followed by a translation

(3) translation followed by a rotation

(4) translation followed by a reflection

Question 7.

The volume, in cubic centimeters, of a sphere whose diameter is 6 centimeters is

(1) 12π

(2) 36π

(3) 48π

(4) 288π

Question 8.

The equation of line k is $y = \frac{1}{3}x - 2$. The equation of line m is $-2x + 6y = 18$. Lines k and m are

(1) parallel

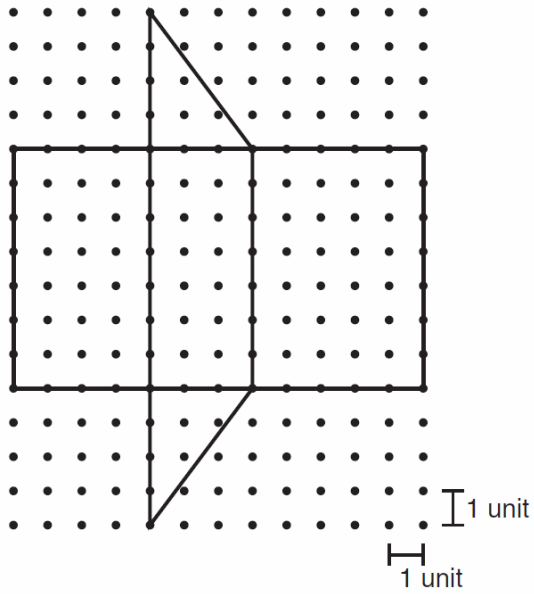
(2) perpendicular

(3) the same line

(4) neither parallel nor perpendicular

Question 9.

This diagram shows the net of a triangular prism.



What is the volume, in cubic units, of the triangular prism that can be made from this net?

Question 10.

What are the center and the radius of the circle whose equation is $(x - 5)^2 + (y + 3)^2 = 16$?

(1) $(-5,3)$ and 16

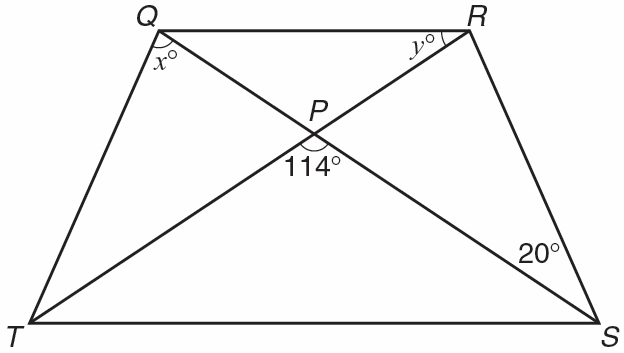
(2) $(5,-3)$ and 16

(3) $(-5,3)$ and 4

(4) $(5,-3)$ and 4

Bonus Question.

Look at this diagram.



not drawn to scale

- Quadrilateral $QRST$ has diagonals $\overline{QS}$ and $\overline{RT}$ that intersect at point P.
- Triangle QPT is congruent to triangle RPS ($\Delta QPT \cong \Delta RPS$).

a. What is the value of x? Show your work or explain how you know.

b. What is the value of y? Show your work or explain how you know.

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

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