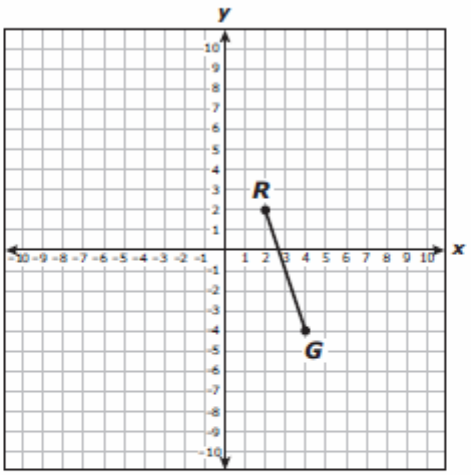
Geometry Daily Quiz
01152020

Question 1.

$\overline{RG}$ is graphed on the coordinate grid below.



Which of the following equations best represents the perpendicular bisector of $\overline{RG}$?

A $y = \frac{1}{3}x - 2$

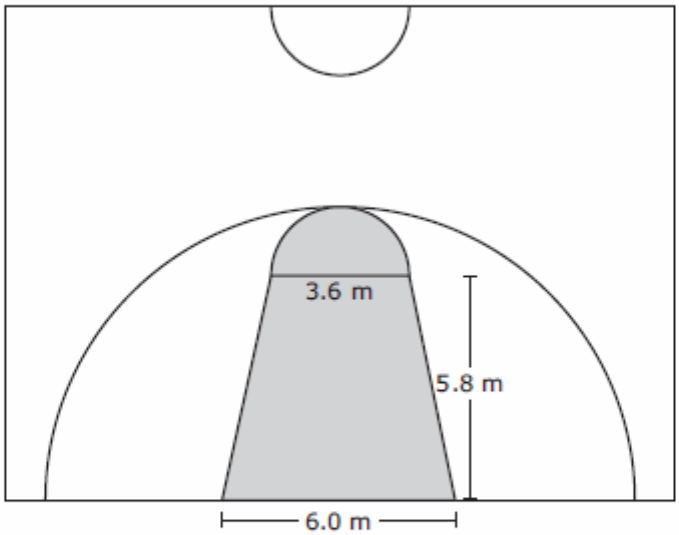
B $y = -3x + 8$

C $y = 3x - 10$

D $y = -\frac{1}{3}x + 1$

Question 2

Half of an international basketball court is shown below. The shaded region is composed of an isosceles trapezoid and a semicircle. The diameter of the semicircle is 3.6 meters.



If 1 meter is approximately equal to 3.28 feet, which of the following is closest to the area of the shaded region in square feet?

A 32.9 ft^2

B 409 ft^2

C 354 ft^2

D 108 ft^2

Question 3.

In quadrilateral $ABCD$, $\overline{AB} \parallel \overline{CD}$, $\angle A \cong \angle B$, and $\overline{AB} \not\cong \overline{CD}$. Which of the following statements is a reasonable conclusion?

A $m\angle A \cong m\angle C$

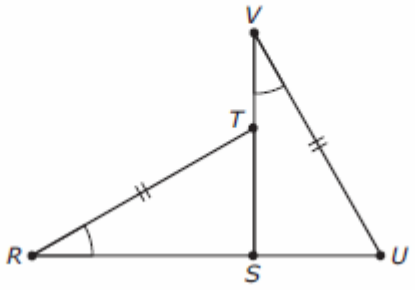
B Quadrilateral $ABCD$ is a rectangle.

C Quadrilateral $ABCD$ is an isosceles trapezoid.

D $\overline{AD} \parallel \overline{BC}$

Question 4.

Triangles RST and VSU are shown below.



$\angle R \cong \angle V$, and $\overline{RT} \cong \overline{VU}$. Which additional condition is sufficient to prove that $\overline{RS} \cong \overline{SV}$?

A $\overline{TS} \cong \overline{SU}$

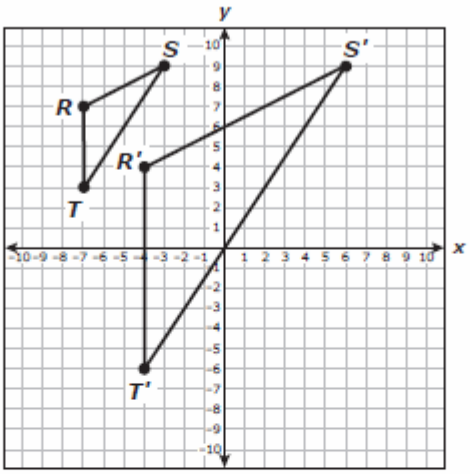
B $\overline{VS} \perp \overline{RU}$

C $\overline{RS} \cong \overline{SU}$

D $\angle VUS \cong \angle RST$

Question 5.

Triangle RST was dilated to create triangle $R'S'T'$, as shown on the coordinate grid below.



Which statement appears to be true?

A The center of dilation used to create $\Delta R'S'T'$ was $(-10, 8)$.

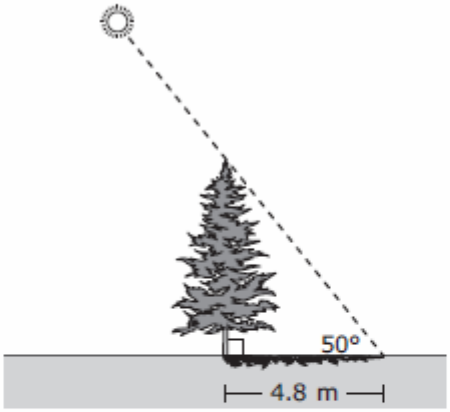
B ΔRST and $\Delta R'S'T'$ are congruent.

C The scale factor used to create $\Delta R'S'T'$ is 2.5.

D ΔRST was reduced in size to create $\Delta R'S'T'$.

Question 6.

A tree's shadow is 4.8 m long on level ground, as shown in the diagram.



The angle of elevation from the tip of the shadow to the sun is 50°. Based on this information, which of the following is closest to the height of the tree?

A 3.6 m

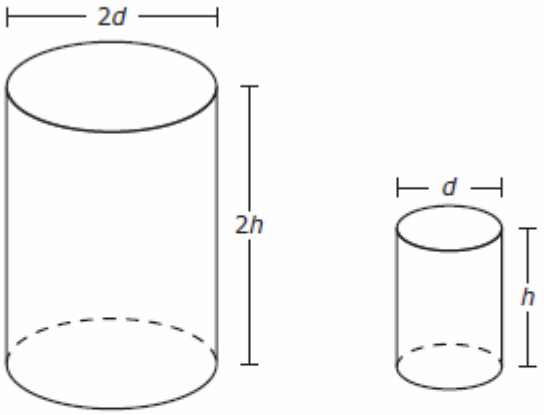
B 5.7 m

C 3.1 m

D 7.5 m

Question 7.

A company packages their product in two sizes of cylinders. Each dimension of the larger cylinder is twice the size of the corresponding dimension of the smaller cylinder.



Based on this information, which of the following statements is true?

A The volume of the larger cylinder is 2 times the volume of the smaller cylinder.

B The volume of the larger cylinder is 4 times the volume of the smaller cylinder.

C The volume of the larger cylinder is 8 times the volume of the smaller cylinder.

D The volume of the larger cylinder is 6 times the volume of the smaller cylinder.

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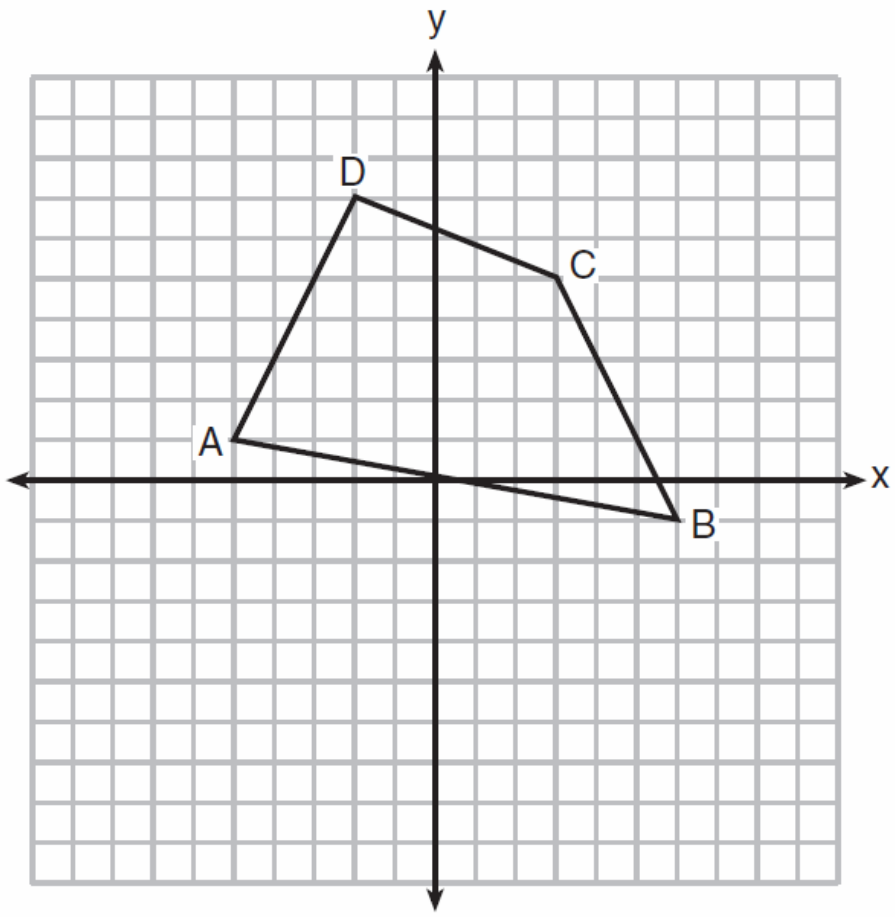
Question 8.

In the diagram below, quadrilateral $ABCD$ has vertices $A(-5,1)$, $B(6,-1)$, $C(3,5)$, and $D(-2,7)$.



What are the coordinates of the midpoint of diagonal $\overline{AC}$?

(1) $(-1,3)$

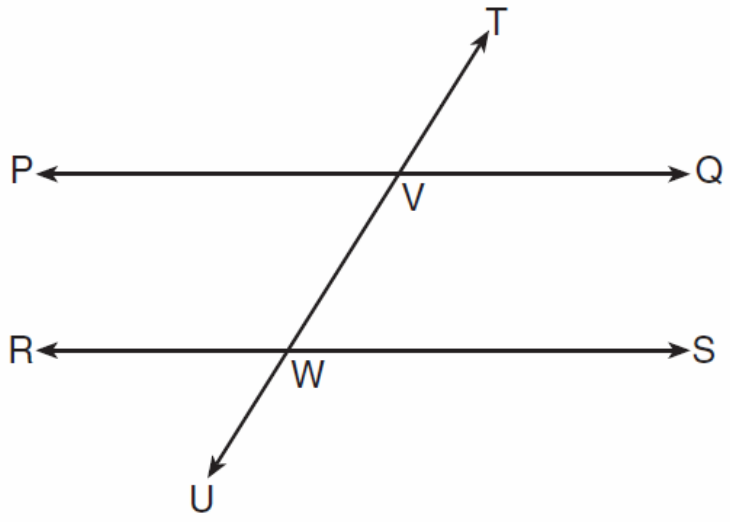
(2) $(1,3)$

(3) $(1,4)$

(4) $(2,3)$

Question 9.

In the diagram below, transversal $\overleftrightarrow{TU}$ intersects $\overleftrightarrow{PQ}$ and $\overleftrightarrow{RS}$ at V and W, respectively.



If $m\angle TVQ = 5x - 22$ and $m\angle VWS = 3x + 10$, for which value of x is $\overleftrightarrow{PQ} \parallel \overleftrightarrow{RS}$?

(1) 6

(2) 16

(3) 24

(4) 28

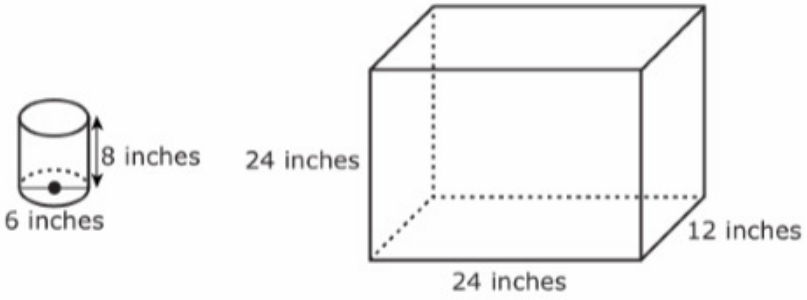
Question 10.

The measures of the angles of a triangle are in the ratio 2:3:4. In degrees, the measure of the *largest* angle of the triangle is

(1) 20
(2) 40
(3) 80
(4) 100

Bonus

The given cylindrical container is used to fill the rectangular prism fish tank with water.



What is the **least** number of full cylindrical containers needed to completely fill the fish tank?

Enter your answer in the box.

[ ] containers

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