Geometry Daily Quiz
01222020

Question 1.

The diameter of the base of a right circular cylinder is 6 cm and its height is 15 cm. In square centimeters, the lateral area of the cylinder is

(1) 180π
(2) 135π
(3) 90π
(4) 45π

Question 2

When the system of equations $y + 2x = x^2$ and $y = x$ is graphed on a set of axes, what is the total number of points of intersection?

(1) 1
(2) 2
(3) 3
(4) 0

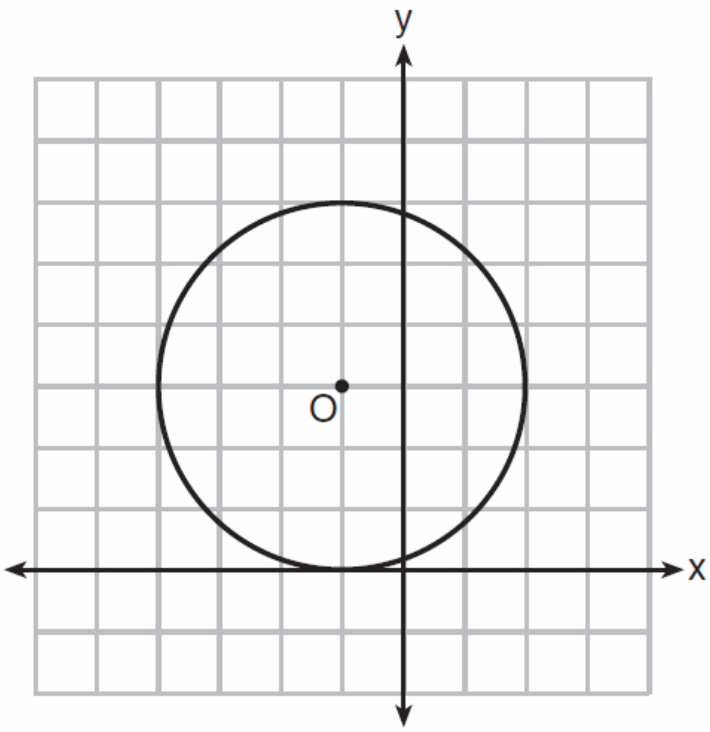
Question 3.

The vertex angle of an isosceles triangle measures 15 degrees more than one of its base angles. How many degrees are there in a base angle of the triangle?

(1) 50
(2) 55
(3) 65
(4) 70

Question 4.

Circle O is graphed on the set of axes below. Which equation represents circle O?



(1) $(x + 1)^2 + (y - 3)^2 = 9$

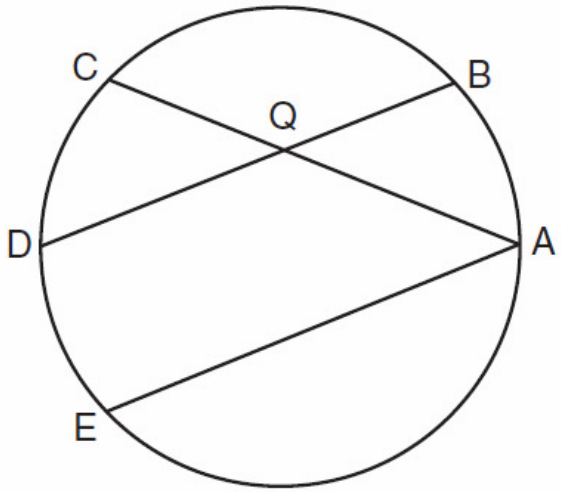
(2) $(x - 1)^2 + (y + 3)^2 = 9$

(3) $(x + 1)^2 + (y - 3)^2 = 6$

(4) $(x - 1)^2 + (y + 3)^2 = 6$

Question 5.

In the diagram of the circle shown below, chords $\overline{AC}$ and $\overline{BD}$ intersect at Q, and chords $\overline{AE}$ and $\overline{BD}$ are parallel.



Which statement must always be true?

(1) $\overset{\frown}{AB} \cong \overset{\frown}{CD}$

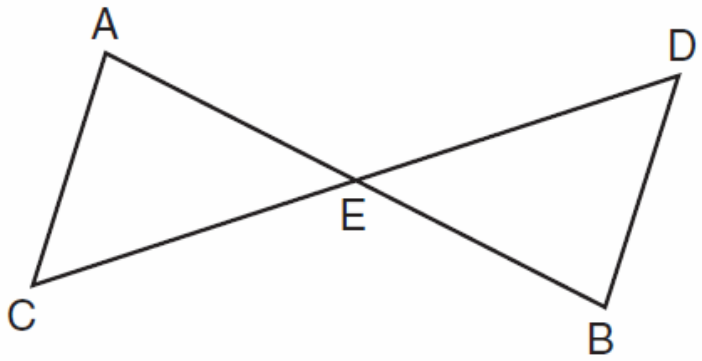
(2) $\overset{\frown}{DE} \cong \overset{\frown}{CD}$

(3) $\overset{\frown}{AB} \cong \overset{\frown}{DE}$

(4) $\overset{\frown}{BD} \cong \overset{\frown}{AE}$

Question 6.

In the diagram below, $\triangle AEC \cong \triangle BED$.



Which statement is *not* always true?

(1) $\overline{AC} \cong \overline{BD}$

(2) $\overline{CE} \cong \overline{DE}$

(3) $\angle EAC \cong \angle EBD$

(4) $\angle ACE \cong \angle DBE$

Question 7.

What is the length of $\overline{RS}$ with $R(-2,3)$ and $S(4,5)$?

(1) $2\sqrt{2}$

(2) 40

(3) $2\sqrt{10}$

(4) $2\sqrt{17}$

Question 8.

A regular polygon has an exterior angle that measures 45°. How many sides does the polygon have?

(1) 10
(2) 8
(3) 6
(4) 4

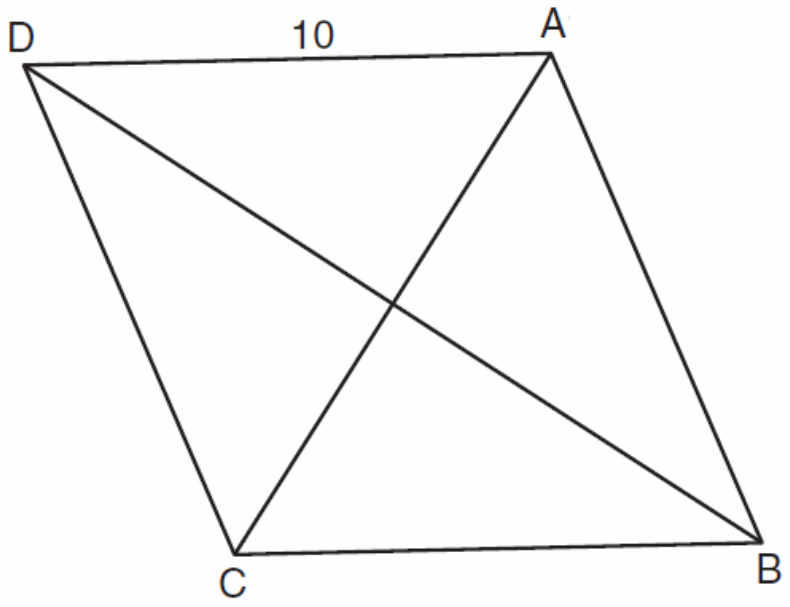
Question 9.

What are the truth values of the statement "Two is prime" and its negation?

(1) The statement is false and its negation is true.
(2) The statement is false and its negation is false.
(3) The statement is true and its negation is true.
(4) The statement is true and its negation is false.

Question 10.

In rhombus $ABCD$, with diagonals $\overline{AC}$ and $\overline{DB}$, $AD = 10$.



If the length of diagonal $\overline{AC}$ is 12, what is the length of $\overline{DB}$?

(1) 8

(2) 16

(3) $\sqrt{44}$

(4) $\sqrt{136}$

Bonus

The degree measure of an angle in a right triangle is x, and $\sin x = \frac{1}{3}$.

Which of these expressions are also equal to $\frac{1}{3}$?

Select **all** that apply.

A. $\cos(x)$

B. $\cos(x - 45°)$

C. $\cos(45° - x)$

D. $\cos(60° - x)$

E. $\cos(90° - x)$

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