Geometry
Daily Quiz 12092019

Question 1.

In all isosceles triangles, the exterior angle of a base angle must always be

(1) a right angle

(2) an acute angle

(3) an obtuse angle

(4) equal to the vertex angle

Question 2.

If $\triangle W'X'Y'$ is the image of $\triangle WXY$ after the transformation $R_{90°}$, which statement is *false*?

(1) $XY = X'Y'$

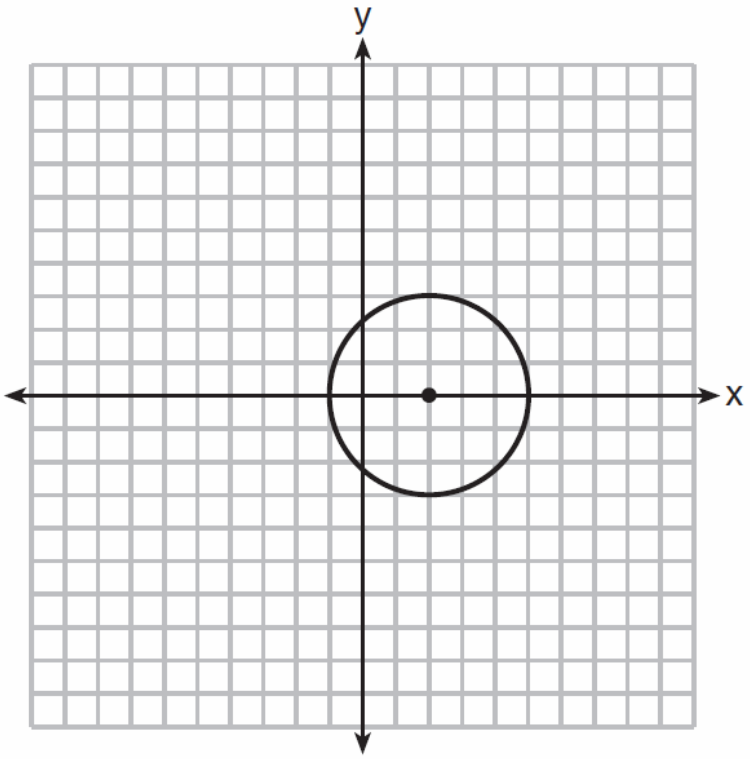
(2) $\overline{WX} \parallel \overline{W'X'}$

(3) $\triangle WXY \cong \triangle W'X'Y'$

(4) $m\angle XWY = m\angle X'W'Y'$

Question 3.

Which equation represents the circle shown in the graph below?



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

(2) $(x + 2)^2 + y^2 = 9$

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

(4) $(x + 2)^2 + y^2 = 3$

Question 4.

In quadrilateral $ABCD$, each diagonal bisects opposite angles. If $m\angle DAB = 70$, then $ABCD$ must be a

(1) rectangle

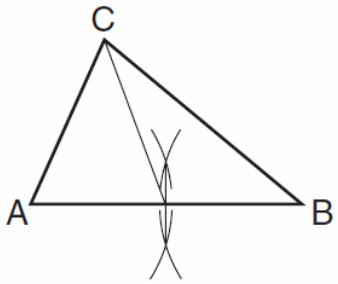
(2) trapezoid

(3) rhombus

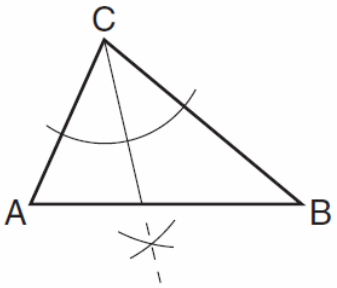
(4) square

Question 5.

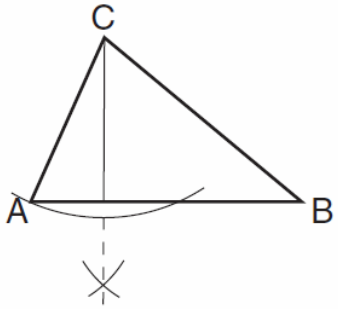
Which diagram illustrates a correct construction of an altitude of $\triangle ABC$?



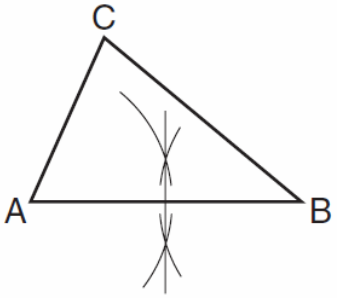
(1)



(3)



(2)



(4)

Question 6.

From external point A, two tangents to circle O are drawn. The points of tangency are B and C. Chord $\overline{BC}$ is drawn to form $\triangle ABC$. If $m\angle ABC = 66$, what is $m\angle A$?

(1) 33

(2) 48

(3) 57

(4) 66

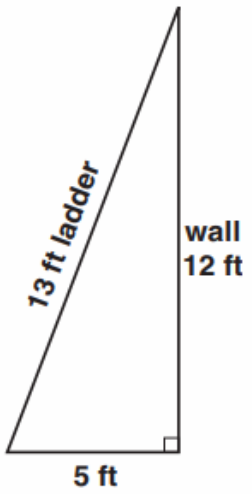
Question 7.

Point A lies on plane $\mathcal{P}$. How many distinct lines passing through point A are perpendicular to plane $\mathcal{P}$?

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

Question 8.

A 13-foot ladder is leaning against a brick wall. The top of the ladder touches the wall 12 feet (ft) above the ground. The bottom of the ladder is 5 ft from the bottom of the wall. What is the sine of the angle formed by the ground and the base of the ladder?



A $\frac{5}{12}$

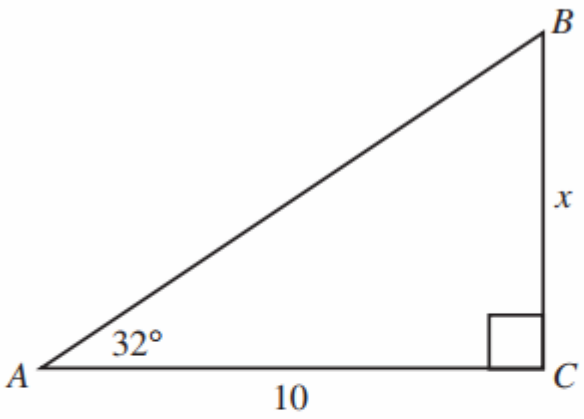
B $\frac{5}{13}$

C $\frac{12}{13}$

D $\frac{13}{5}$

Question 9.

In the accompanying diagram, $m\angle A = 32°$ and $AC = 10$. Which equation could be used to find x in $\triangle ABC$?



A $x = 10 \sin 32°$

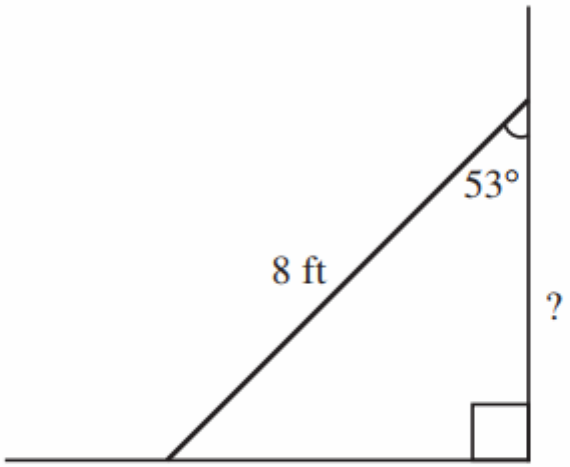
B $x = 10 \cos 32°$

C $x = 10 \tan 32°$

D $x = \dfrac{10}{\cos 32°}$

Question 10.

The diagram shows an 8-foot ladder leaning against a wall. The ladder makes a 53° angle with the wall. Which is closest to the distance up the wall the ladder reaches?



$\sin 53° \approx 0.80$
$\cos 53° \approx 0.60$
$\tan 53° \approx 1.33$

A 3.2 ft

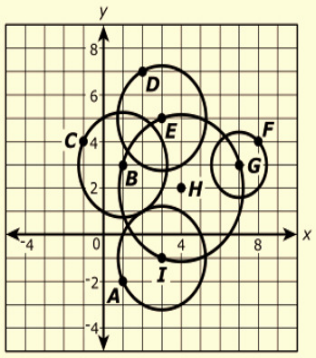
B 4.8 ft

C 6.4 ft

D 9.6 ft

Bonus.

In the *xy*-coordinate plane shown, points *B*, *E*, *G*, and *I* are on the circle with center *H*.



Part A

What is an equation for the circle with center *H*?

- A. $(x-4)^2+(y-2)^2=\sqrt{10}$
- B. $(x-4)^2+(y-2)^2=10$
- C. $(x+4)^2+(y+2)^2=\sqrt{10}$
- D. $(x+4)^2+(y+2)^2=10$

Part B

The equation $x^2+y^2-6x+2y+5=0$ represents the circle with which center?

- A. B
- B. E
- C. G
- D. I

You must show your working to get your points for this problem.

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