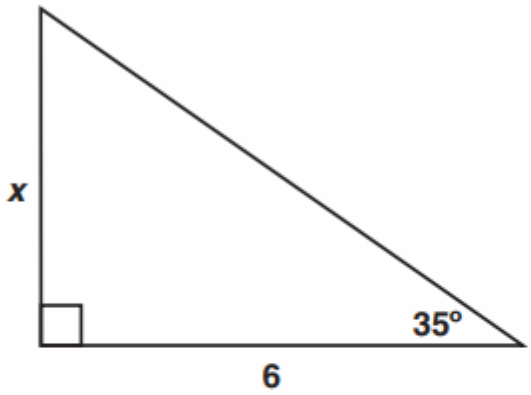
Geometry
Daily Quiz 12132019

Question 1.

What is the approximate value of x in the triangle below?



$\sin 35° \approx 0.57$
$\cos 35° \approx 0.82$
$\tan 35° \approx 0.7$

A 3.4 units

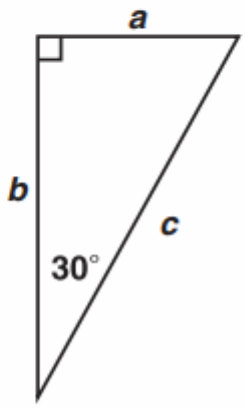
B 4.2 units

C 4.9 units

D 7.3 units

Question 2.

If $a = 3\sqrt{3}$ in the right triangle below, what is the value of b?



A 9

B $6\sqrt{3}$

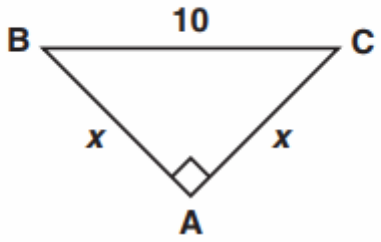
C $12\sqrt{3}$

D 18

CSG10052

Question 3.

What is the value of x in the triangle below?



A 5

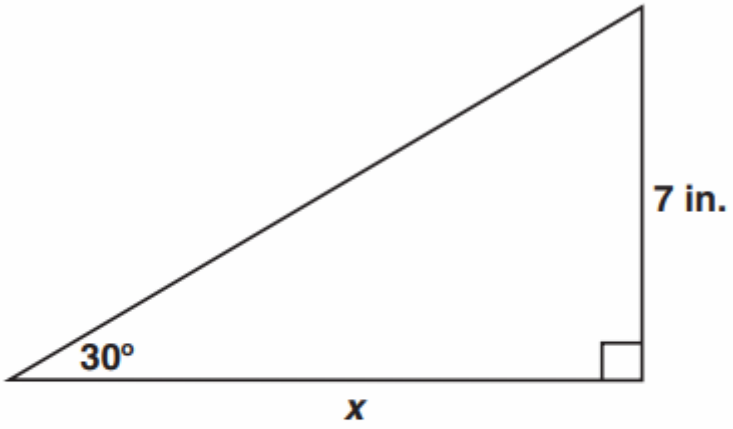
B $5\sqrt{2}$

C $10\sqrt{3}$

D 20

Question 4.

What is the value of x, in inches?



A $7\sqrt{3}$

B 14

C $14\sqrt{3}$

D 21

Question 5.

A square is circumscribed about a circle. What is the ratio of the area of the circle to the area of the square?

A $\frac{1}{4}$

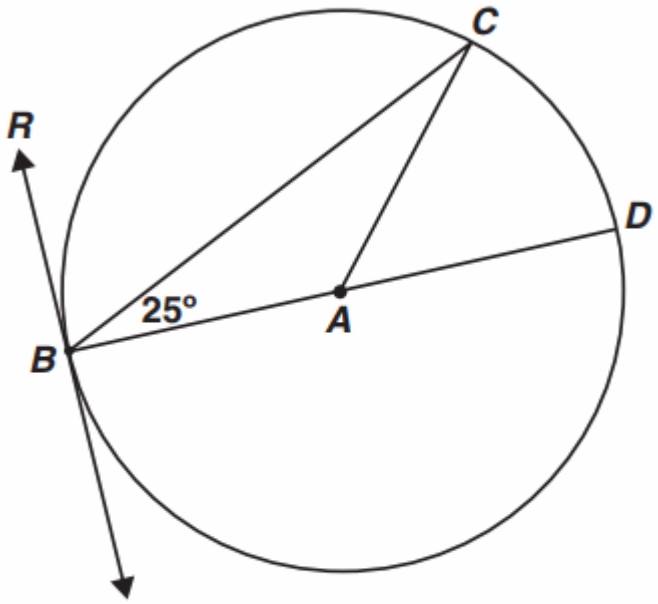
B $\frac{1}{2}$

C $\frac{2}{\pi}$

D $\frac{\pi}{4}$

Question 6.

$\overleftrightarrow{RB}$ **is tangent to a circle, whose center is** A**, at point** B**.** $\overline{BD}$ **is a diameter.**



What is $m\angle CBR$**?**

A 50°

B 65°

C 90°

D 130°

Question 7.

The vertices of $\triangle ABC$ are $A(2, 1)$, $B(3, 4)$, and $C(1, 3)$. If $\triangle ABC$ is translated 1 unit down and 3 units to the left to create $\triangle DEF$, what are the coordinates of the vertices of $\triangle DEF$?

A $D(0, 1), E(1, 2), F(1, 3)$

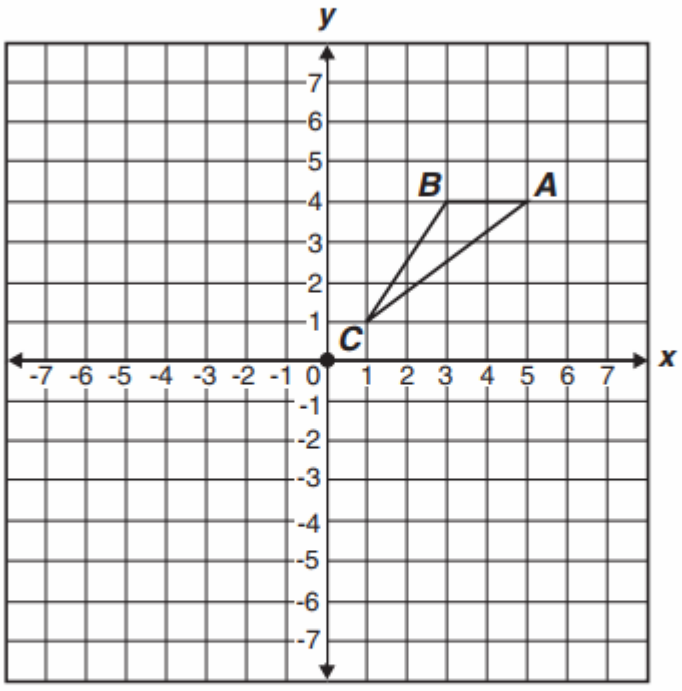
B $D(0, -1), E(0, 3), F(-2, -2)$

C $D(-2, 2), E(0, 3), F(-1, 0)$

D $D(-1, 0), E(0, 3), F(-2, 2)$

Question 8.

If triangle ABC is rotated 180 degrees about the origin, what are the coordinates of A'?



A $(-5, -4)$

B $(-5, 4)$

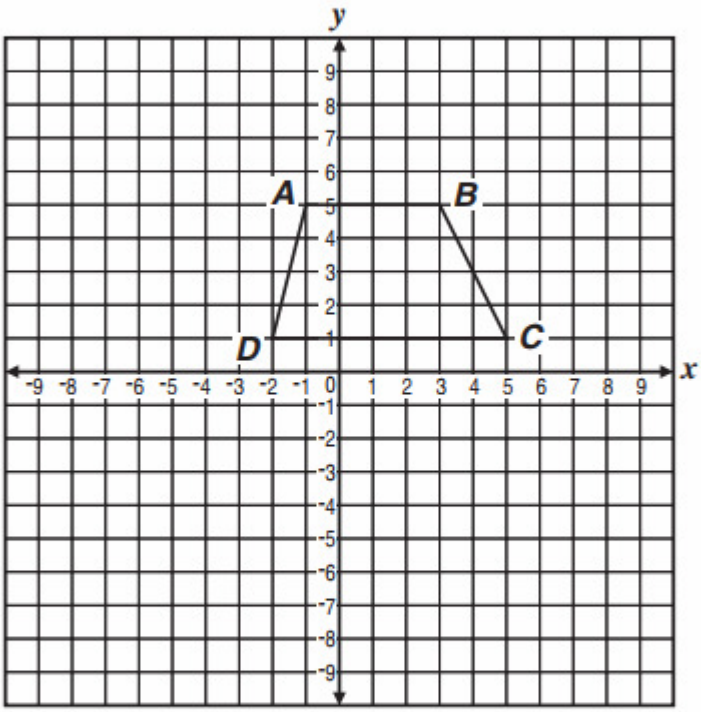
C $(-4, 5)$

D $(-4, -5)$

Question 9.

Trapezoid $ABCD$ below is to be translated to trapezoid $A'B'C'D'$ by the following motion rule.

$$(x, y) \rightarrow (x + 3, y - 4)$$



What will be the coordinates of vertex C'?

A $(1, -3)$

B $(2, 1)$

C $(6, 1)$

D $(8, -3)$

Question 10.

Which expression describes the translation of a point from $(-3, 4)$ to $(4, -1)$?

A 7 units left and 5 units up

B 7 units right and 5 units up

C 7 units left and 5 units down

D 7 units right and 5 units down

Bonus.

The equation $x^2 - 12x + 15 = -y^2 - 4y$ describes a circle in the coordinate plane.
Find the radius of the circle and the coordinates of its center.

a. radius =
b. center:(,)

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

PA00003145

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