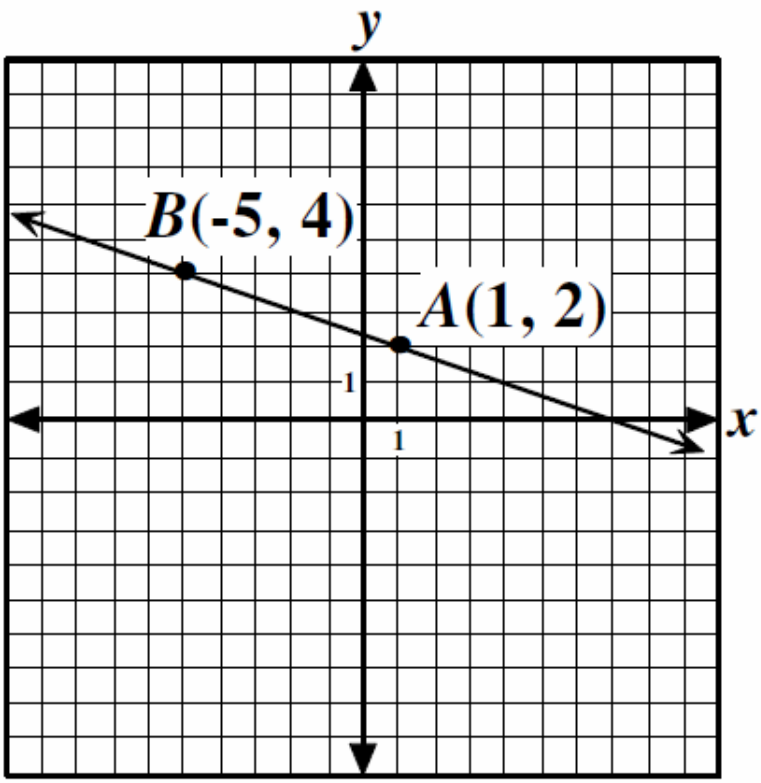
Geometry Daily Quiz
01302020
Another easy quiz. Make sure you get 110!

Question 1.

Which equation describes the line through points *A* and *B*?



A $x - 3y = -5$

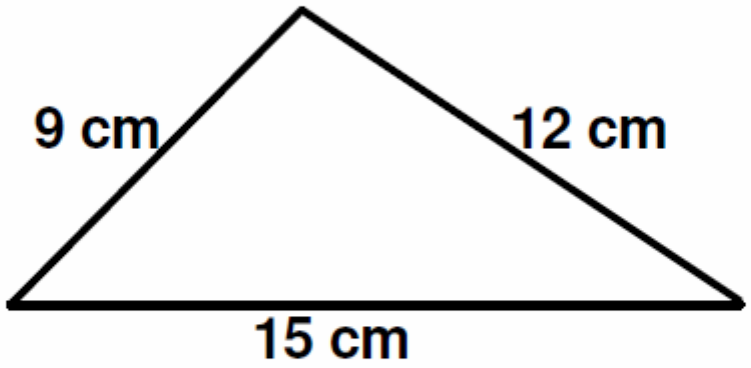
B $x + 3y = -5$

C $x + 3y = 7$

D $3x + y = 5$

Question 2

What is the area of a right triangle with legs of length 9 cm and 12 cm and a hypotenuse of length 15 cm?



A 36 square cm
B 54 square cm
C 90 square cm
D 108 square cm

Question 3.

A sector of a circle is created from a central angle with a measure of 60°. If the diameter of the circle is 6 inches, what is the area of the sector?

A 1.5π in.^{2}

B 2π in.^{2}

C 6π in.^{2}

D 8π in.^{2}

Question 4.

If $\overleftrightarrow{CD}$ intersects $\overline{AB}$ at point K and $\overleftrightarrow{CD}$ is the perpendicular bisector of $\overline{AB}$, which statement must be true?

A $\overline{CK} = \overline{KD}$

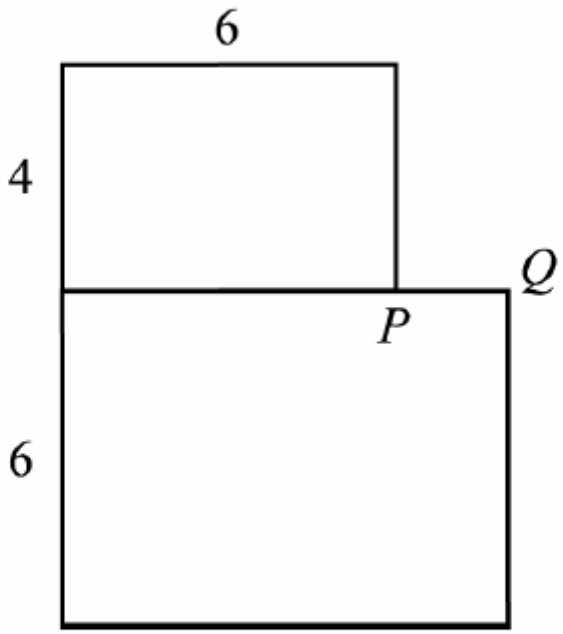
B $\overline{AB} = \overline{CD}$

C $\overline{AC} = \overline{BC}$

D $\overline{AC} = \overline{AD}$

Question 5.

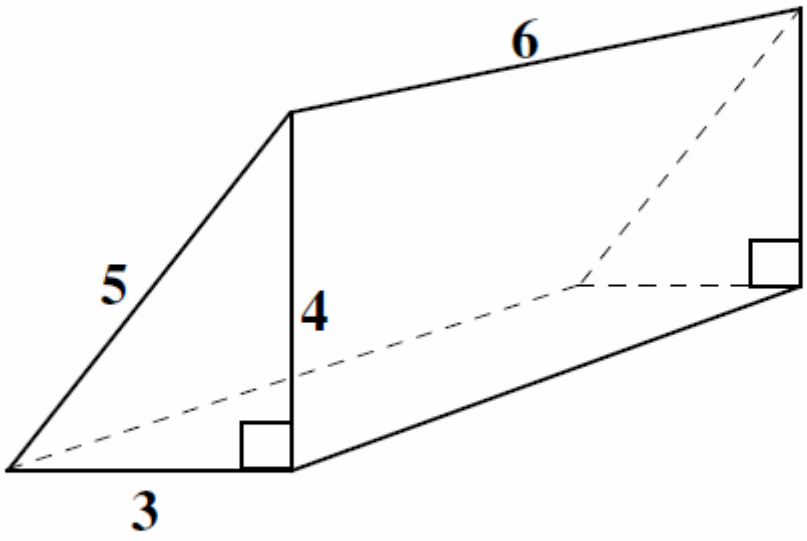
The figure below shows two similar rectangles. What is the length of $\overline{PQ}$?



A 2
B 3
C 4
D 5

Question 6.

In the figure below, the two triangular faces of the prism are right triangles with sides of length 3, 4, and 5. The other three faces are rectangles. What is the surface area of the prism?



A 72
B 84
C 96
D 108

Question 7.

Planes P and R are parallel, and line ℓ is in plane R. Which of the following is true?

A Every line that is perpendicular to ℓ intersects plane P.
B Every line in plane P is parallel to ℓ.
C No line in plane P is skew to ℓ.
D No line in plane P intersects line ℓ.

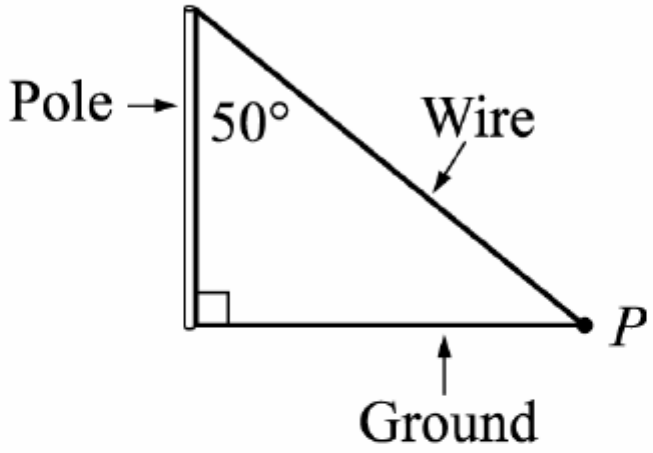
Question 8.

What is the length of a diagonal of a rectangle with length 12 and width 5?

A 7
B 13
C 17
D 60

Question 9.

A 100-foot wire extends from the top of a pole to a point *P* on the ground, as shown in the figure below.



Which expression gives the distance, in feet, from *P* to the bottom of the pole?

A $100\cos 50°$

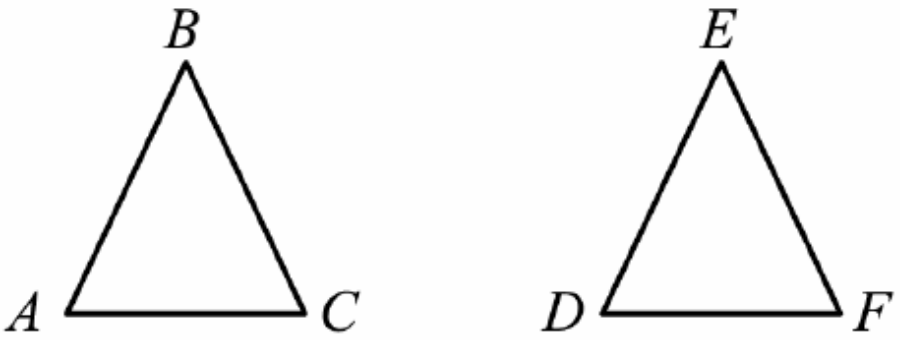
B $100\sin 50°$

C $\dfrac{\cos 50°}{100}$

D $\dfrac{\sin 50°}{100}$

Question 10.

Which set of information is NOT enough to prove that ΔABC is congruent to ΔDEF ?



A $\angle A \cong \angle D,\ \angle C \cong \angle F,$ and $\overline{BC} \cong \overline{EF}$

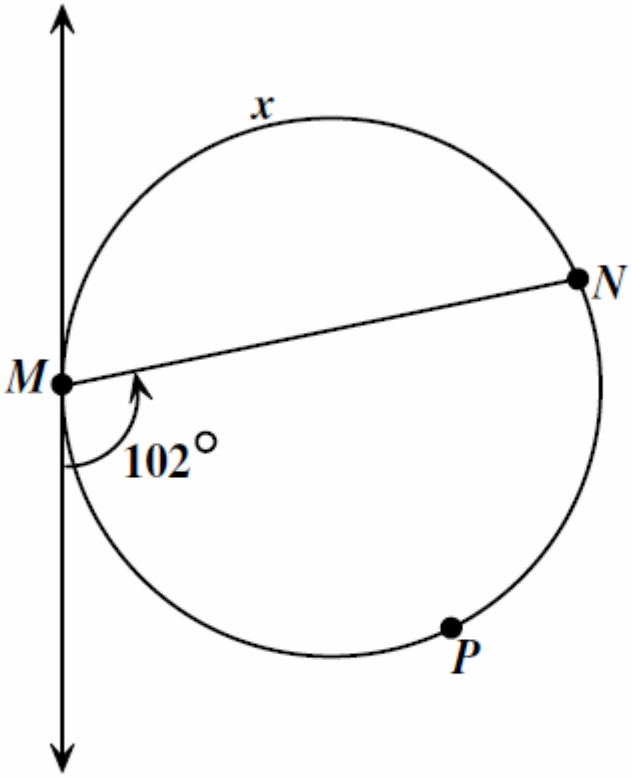
B $\overline{AB} \cong \overline{DE},\ \overline{BC} \cong \overline{EF},$ and $\angle B \cong \angle E$

C $\angle A \cong \angle D,\ \angle C \cong \angle F,$ and $\overline{AC} \cong \overline{DF}$

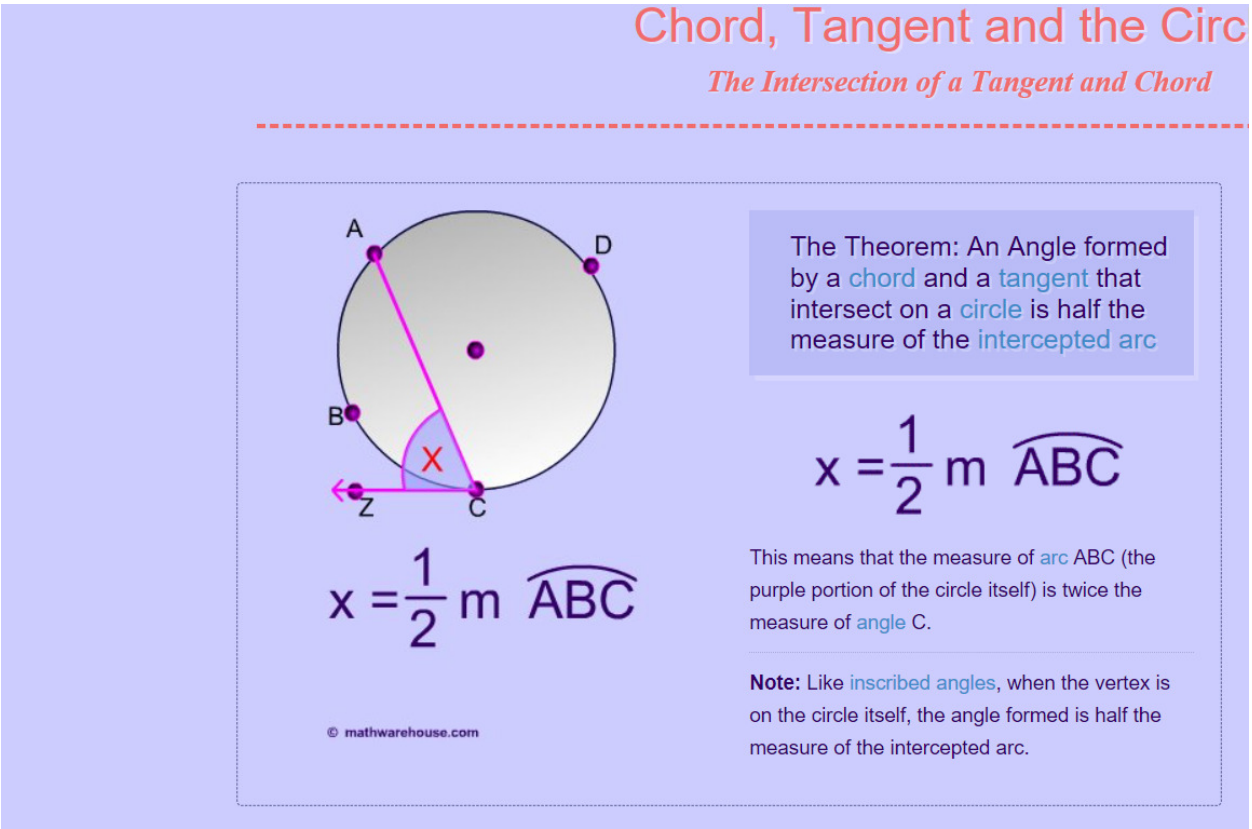
D $\angle A \cong \angle D,\ \overline{AC} \cong \overline{DF},$ and $\overline{BC} \cong \overline{EF}$

Bonus

What is the value of x in the figure below?



A 51°
B 78°
C 156°
D 180°



http://www.mathwarehouse.com/geometry/circle/angle-tangent-and-chord.php

Converse, Inverse, Contrapositive

Given an if-then statement "if p , then q ," we can create three related statements:

A conditional statement consists of two parts, a hypothesis in the "if" clause and a conclusion in the "then" clause. For instance, "If it rains, then they cancel school."
"It rains" is the hypothesis.
"They cancel school" is the conclusion.

To form the converse of the conditional statement, interchange the hypothesis and the conclusion.
The converse of *"If it rains, then they cancel school"* is *"If they cancel school, then it rains."*

To form the inverse of the conditional statement, take the negation of both the hypothesis and the conclusion.
The inverse of *"If it rains, then they cancel school"* is *"If it does not rain, then they do not cancel school."*

To form the contrapositive of the conditional statement, interchange the hypothesis and the conclusion of the inverse statement.
The contrapositive of *"If it rains, then they cancel school"* is *"If they do not cancel school, then it does not rain."*

The link to the above information.
https://www.varsitytutors.com/hotmath/hotmath_help/topics/converse-inverse-contrapositive

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