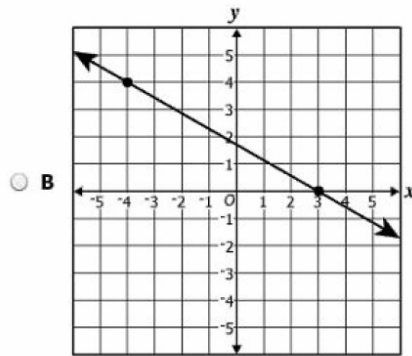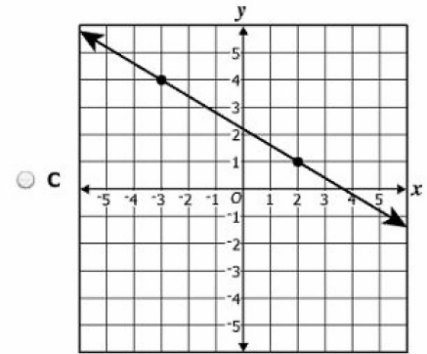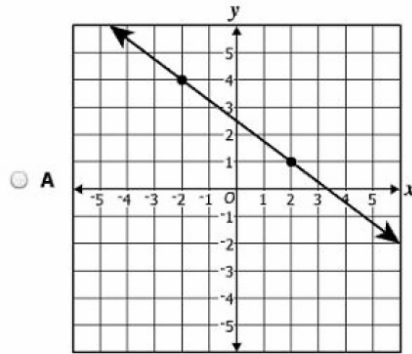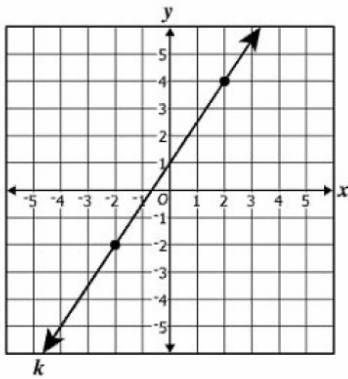Geometry Daily Quiz 03082020

We have to keep working on speed and accuracy. Check back to make sure you have a hundred before you hand up your paper.

Question 1.

Which graph best represents a line perpendicular to line k ?
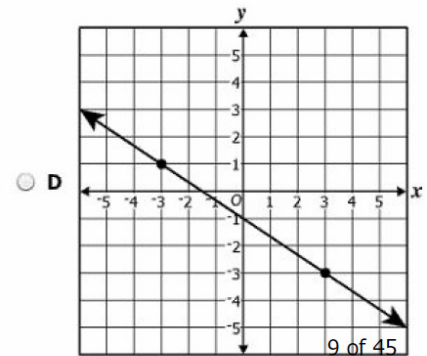
Question 2

Which statement describes the construction being illustrated on the rectangle shown?
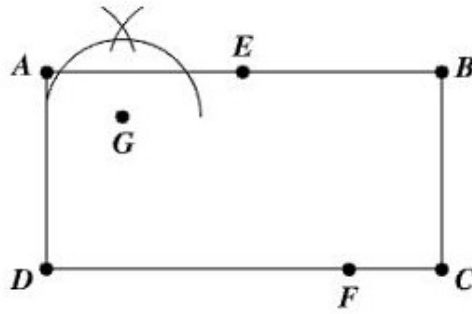
  A A bisector of $\overline{AB}$

  B A line segment congruent to $\overline{AB}$

  C A perpendicular to $\overline{AB}$ through point E on $\overline{AB}$

  D A perpendicular to $\overline{AB}$ through point G not on $\overline{AB}$

Question 3.

Four lines and four congruent angles are identified in the diagram.
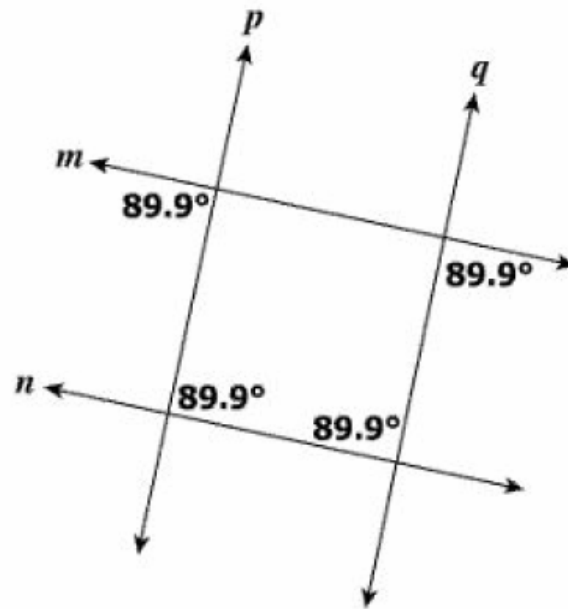
Which statement must be true?

○ **A** Only $m \parallel n$

○ **B** Only $p \parallel q$

○ **C** $p \parallel q$ and $m \parallel n$

○ **D** No pair of lines is parallel.

Question 4.

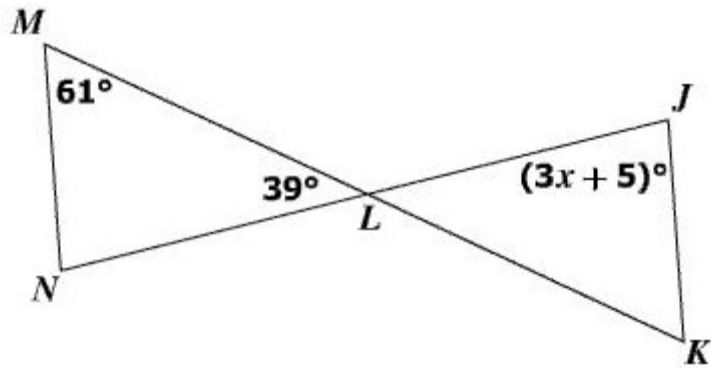The figure shows $\overline{JN}$ and $\overline{KM}$ intersecting at point L.

M

61°

J

39°
L

$(3x + 5)°$

N

K

What value of x proves $\overline{JK} \parallel \overline{MN}$?

$x = $ [   ]

Question 5.

Triangle ABC is reflected across the x-axis and then reflected across the y-axis to create $\triangle A'B'C'$.
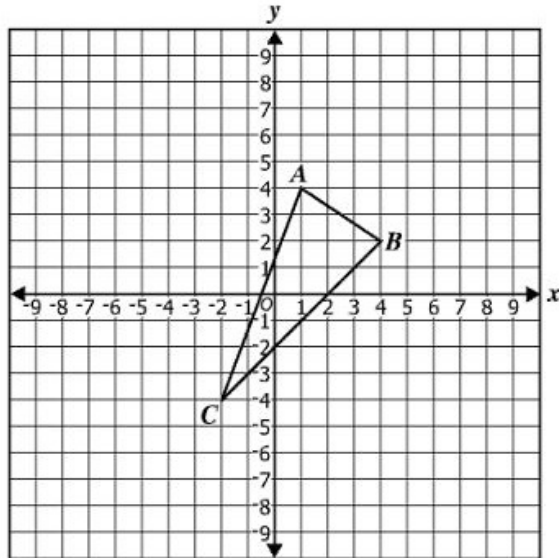
What are the coordinates of A' ?

A $(^-4, ^-1)$ C $(^-1, ^-4)$

B $(^-2, ^-4)$ D $(^-1, 4)$

Question 6.

A diagonal walkway cuts through a park bordered by two parallel streets. The parks department plans to add an additional walkway as indicated by the dashed line segment in the figure.

What is the value of x ?

○ **A** 42

○ **B** 48

○ **C** 90

○ **D** 138

Question 7.

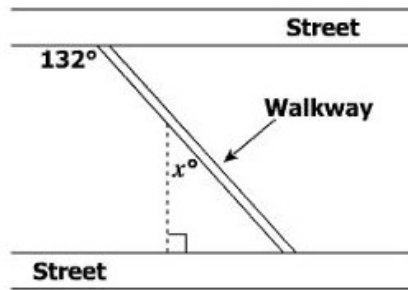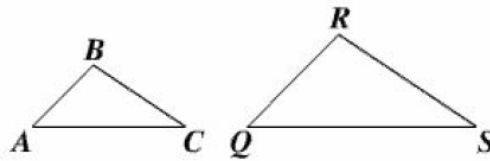The coordinate values of the vertices of △KLM are integers.
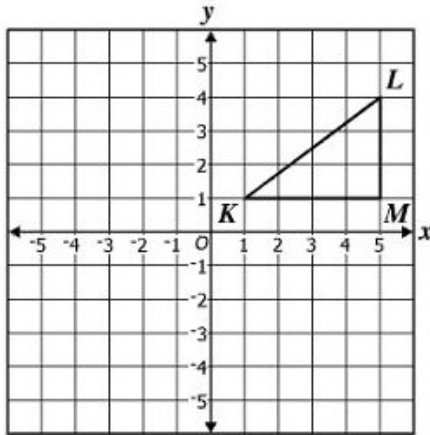
Which set of coordinate pairs could represent the vertices of a triangle congruent to △KLM ?

○ A $\{(0, 0), (3, 4), (0, 5)\}$

○ B $\{(0, 0), (-5, 0), (0, 4)\}$

○ C $\{(-1, 1), (-4, 5), (-1, 5)\}$

○ D $\{(-1, 1), (-1, 4), (2, 1)\}$

Question 8.

Given: △ABC and △QRS

Select two relationships that would prove △$ABC \sim$ △QRS by the Side-Angle-Side (SAS) Similarity Theorem.

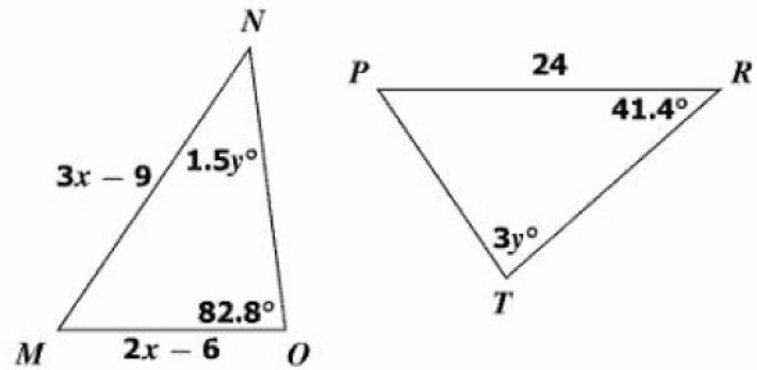| $\angle A \cong \angle Q$ | $\angle C \cong \angle S$ | $\angle B \cong \angle Q$ | $\dfrac{AB}{QR} = \dfrac{BC}{RS}$ | $\dfrac{AB}{QR} = \dfrac{AC}{QS}$ | $\dfrac{AC}{QS} = \dfrac{BC}{QR}$ |

Question 9.

The diagonals of a square measure 14 cm. Which is the length of a side of the square?

○ **A** $7\sqrt{2}$ cm

○ **B** $7\sqrt{3}$ cm

○ **C** $14\sqrt{2}$ cm

○ **D** $14\sqrt{3}$ cm

What values for x and y make $\triangle MNO \cong \triangle PRT$?

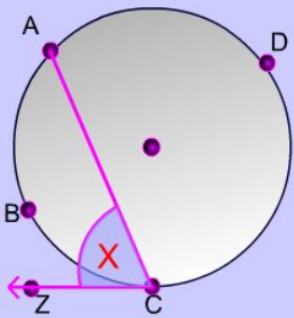- A $x = 11, y = 13.8$
- B $x = 11, y = 27.6$
- C $x = 15, y = 13.8$
- D $x = 15, y = 27.6$

Bonus

Chord, Tangent and the Circ

The Intersection of a Tangent and Chord

The Theorem: An Angle formed by a chord and a tangent that intersect on a circle is half the measure of the intercepted arc

$$x = \frac{1}{2} m \ \widehat{ABC}$$

This means that the measure of arc ABC (the purple portion of the circle itself) is twice the measure of angle C.

Note: Like inscribed angles, when the vertex is on the circle itself, the angle formed is half the measure of the intercepted arc.

$$x = \frac{1}{2} m \ \widehat{ABC}$$

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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 kilometer = 0.62 mile	1 cup = 8 fluid ounces
1 meter = 39.37 inches	1 pound = 16 ounces	1 pint = 2 cups
1 mile = 5280 feet	1 pound = 0.454 kilograms	1 quart = 2 pints
1 mile = 1760 yards	1 kilogram = 2.2 pounds	1 gallon = 4 quarts
1 mile = 1.609 kilometers	1 ton = 2000 pounds	1 gallon = 3.785 liters
		1 liter = 0.264 gallons
		1 liter = 1000 cubic centimeters

Triangle	$A = \dfrac{1}{2}bh$
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	$V = \dfrac{4}{3}\pi r^3$
Cone	$V = \dfrac{1}{3}\pi r^2 h$
Pyramid	$V = \dfrac{1}{3}Bh$

Quadratic Formula	$x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Arithmetic Sequence	$a_n = a_1 + (n-1)d$
Geometric Sequence	$a_n = a_1 r^{n-1}$
Geometric Series	$S_n = \dfrac{a_1 - a_1 r^n}{1-r}$ where $r \neq 1$
Radians	1 radian $= \dfrac{180}{\pi}$ degrees
Degrees	1 degree $= \dfrac{\pi}{180}$ radians