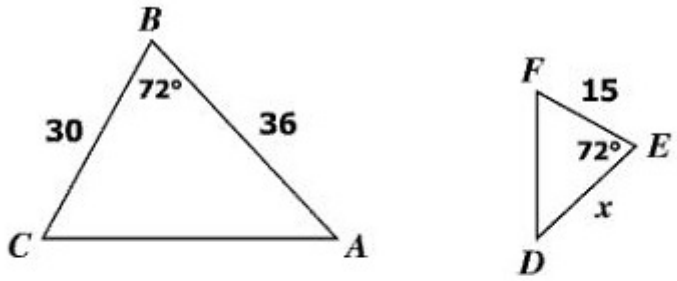
Geometry Daily Quiz 02122020

No bonus today. The quiz is too easy.

Question 1.

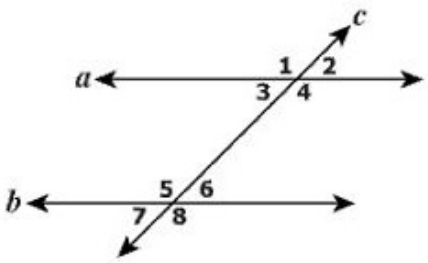
For what value of x is $\triangle ABC \sim \triangle DEF$?



- **A** 18
- **B** 21
- **C** 25
- **D** 72

Question 2

In this figure, parallel lines a and b are intersected by line c.

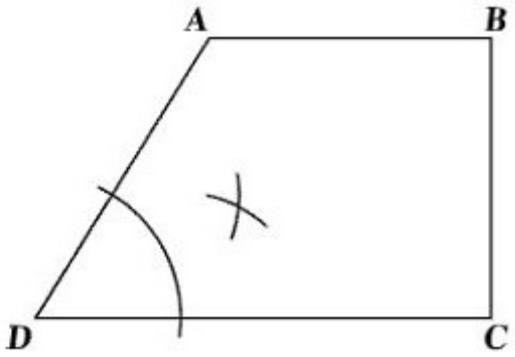


Which pair of angles is NOT supplementary?

- **A** $\angle 1$ and $\angle 6$
- **B** $\angle 3$ and $\angle 8$
- **C** $\angle 2$ and $\angle 7$
- **D** $\angle 4$ and $\angle 6$

Question 3.

What type of construction is illustrated in the figure?

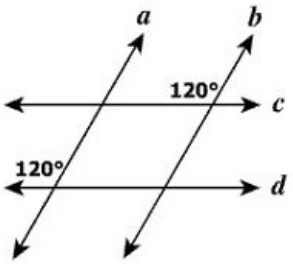


- **A** The bisection of $\angle D$
- **B** The bisection of $\overline{BD}$
- **C** An angle congruent to $\angle D$
- **D** A line segment congruent to $\overline{AB}$

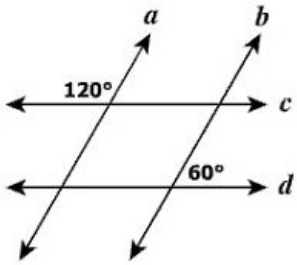
Question 4.

Which diagram shows a pair of angle measures that prove lines a and b are parallel?

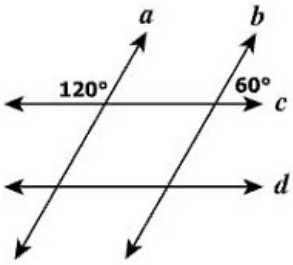
A



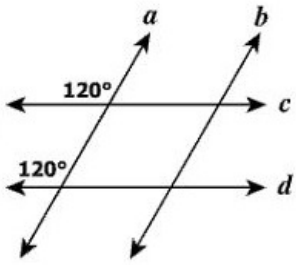
C



B



D



Question 5.

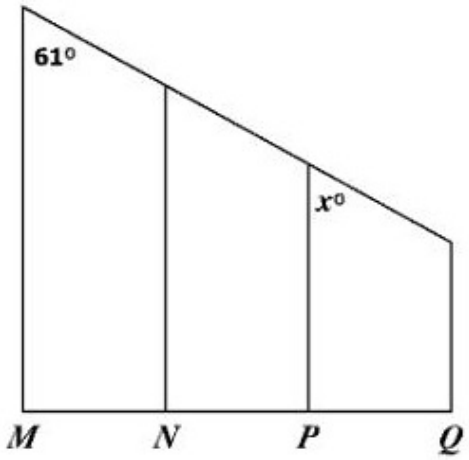
Which is a valid conclusion that can be drawn from these statements?

If a quadrilateral is a rhombus, then it is a parallelogram.
If a quadrilateral is a parallelogram, then its opposite angles are congruent.

- **A** Every quadrilateral is a rhombus.
- **B** Every parallelogram is a rhombus.
- **C** Opposite angles of a rhombus are congruent.
- **D** Opposite angles of a quadrilateral are congruent.

Question 6.

This figure shows parallel stair railings through points M, N, P, and Q.

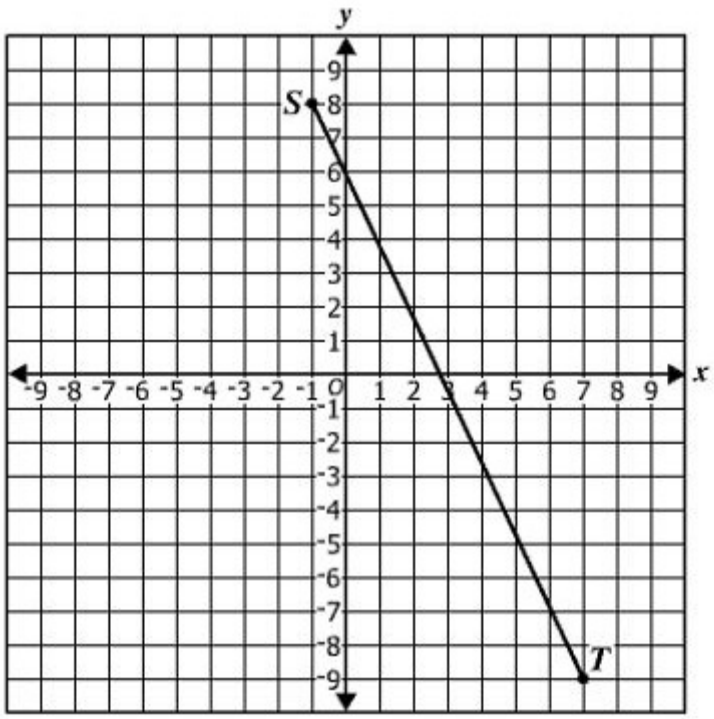


What is the value of x ?

- **A** 29
- **B** 45
- **C** 61
- **D** 119

Question 7.

Given: $S(-1, 8)$ and $T(7, -9)$

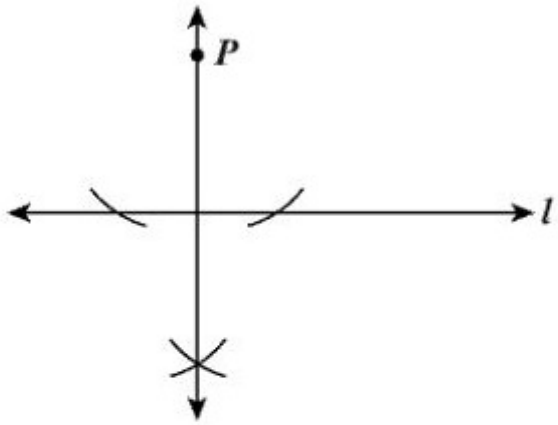


What is the length of $\overline{ST}$?

- **A** $\sqrt{23}$
- **B** 5
- **C** $5\sqrt{13}$
- **D** $\sqrt{353}$

Question 8.

Which best describes the construction in the diagram shown?



- **A** The bisector of a line segment
- **B** A line segment congruent to a given line segment
- **C** A perpendicular to a given line at a point on the line
- **D** A perpendicular to a given line from a point not on the line

Question 9.

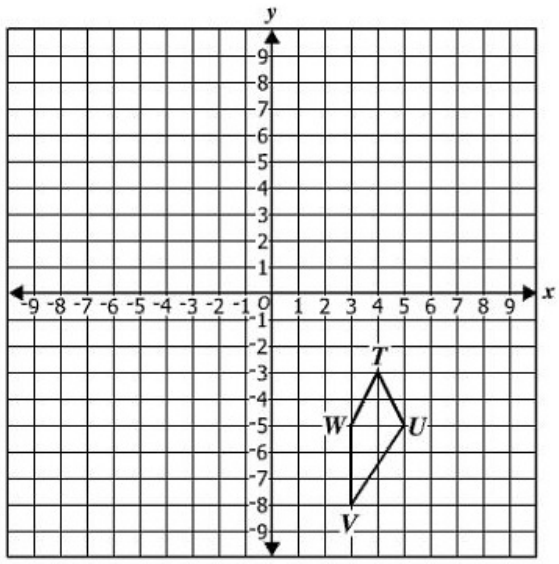
Which is the inverse of the following statement?

If the measure of an angle is 90°, then it is a right angle.

- **A** If the measure of an angle is not 90°, then it is not a right angle.
- **B** If the measure of an angle is not 90°, then it is a right angle.
- **C** If an angle is not a right angle, then its measure is not 90°.
- **D** If an angle is a right angle, then its measure is 90°.

Question 10.

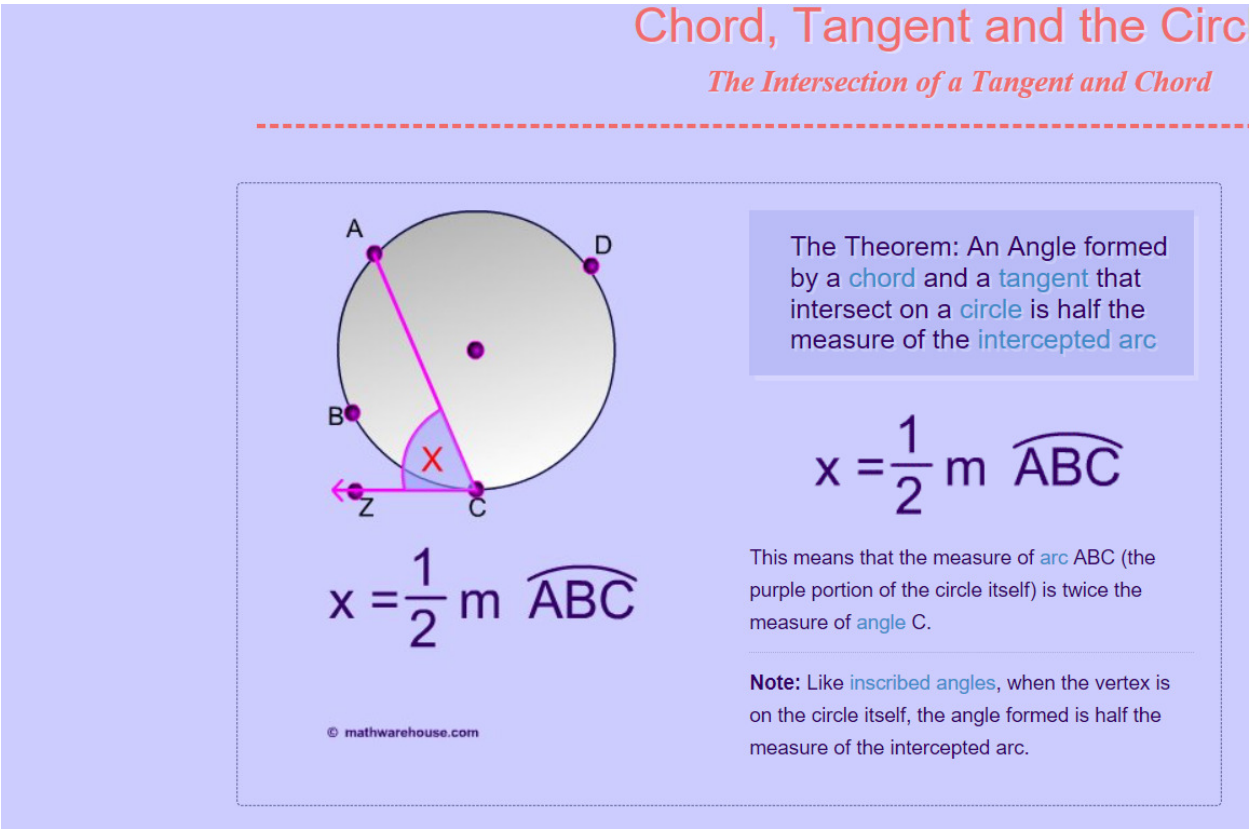
Quadrilateral $TUVW$ is shown.



If $TUVW$ is reflected across the line $y = x$, what are the coordinates of V' ?

- **A** (8, −3)
- **B** (3, 8)
- **C** (−3, −8)
- **D** (−8, 3)

Bonus



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