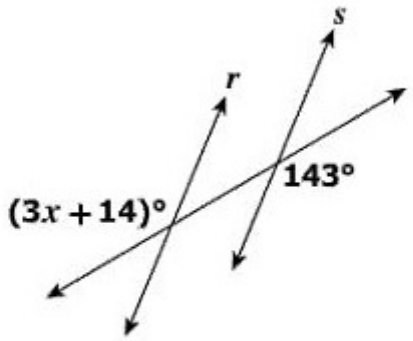
Geometry Daily Quiz 02142020

There will be no bonus today. The quiz is too easy. If you do not finish on time you automatically loose 5 points. We have to start working on speed and accuracy.

Question 1.

Lines r and s are cut by a transversal.



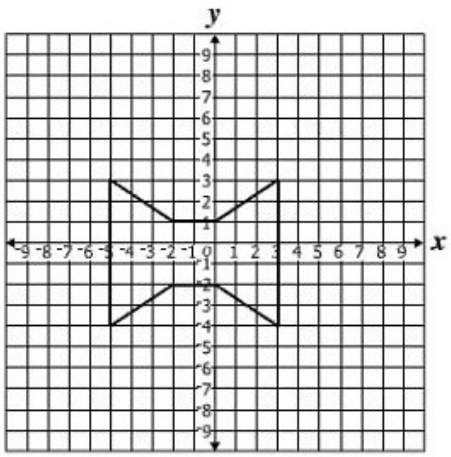
What value of x proves that $r \parallel s$?

$x =$ [ ]

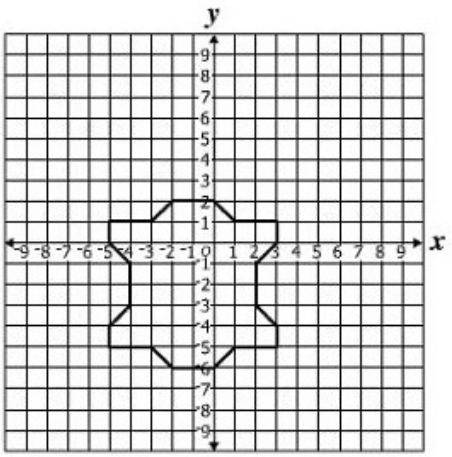
Question 2

For which polygon are both $x = -1$ and $y = -2$ lines of symmetry?

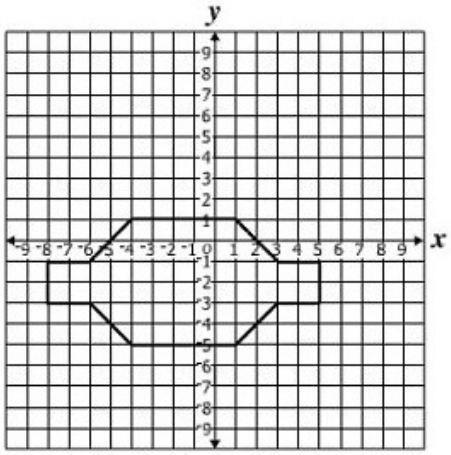
A



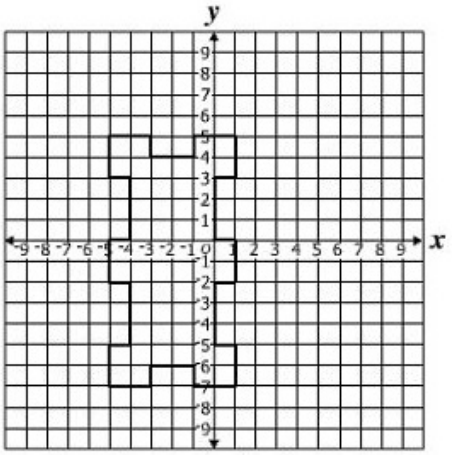
C



B

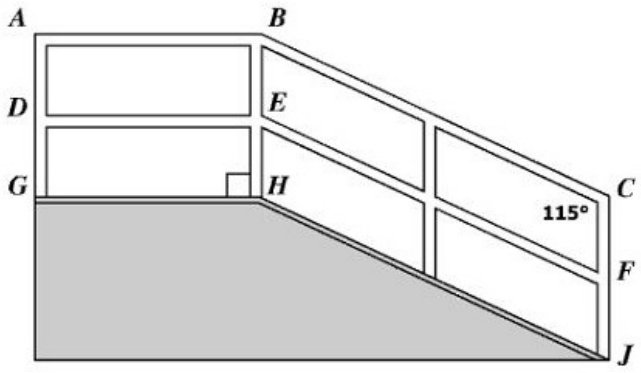


D



Question 3.

The figure represents a ramp with handrails. Segments AB and DE are parallel to $\overline{GH}$. Segments BC and EF are parallel to $\overline{HJ}$. Segments AG and BH are parallel to $\overline{CJ}$.

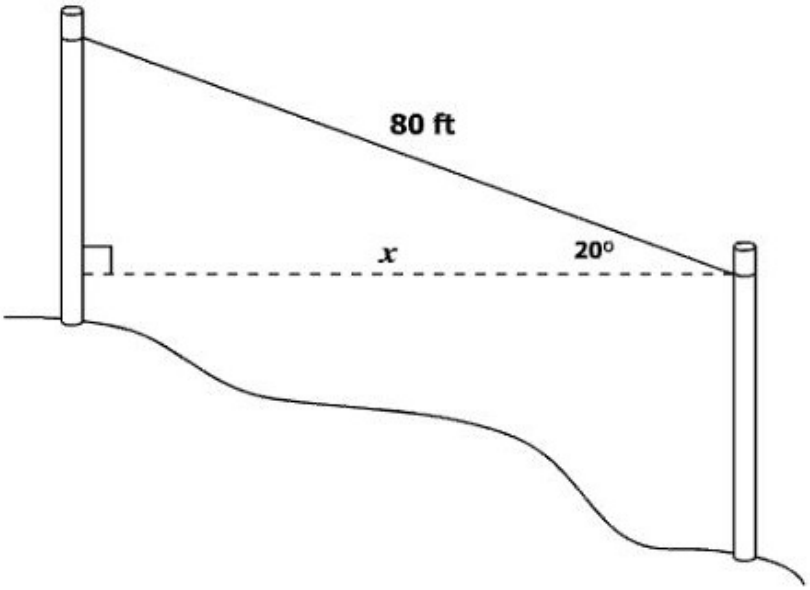


If $m\angle JCB = 115°$, what is $m\angle CBA$?

- **A** 65°
- **B** 90°
- **C** 115°
- **D** 155°

Question 4.

Reuben attached a wire between two poles on a hill as shown.

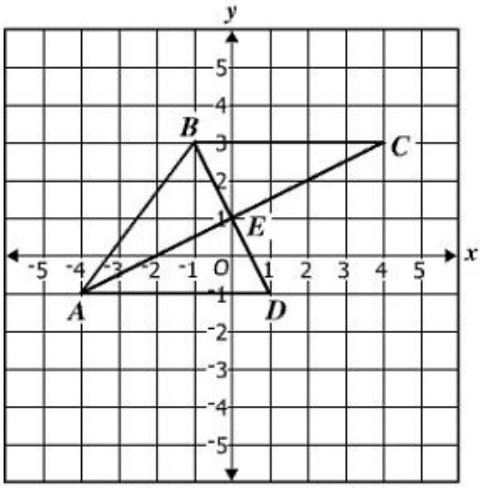


Which is closest to x, the distance between the two poles?

- **A** 27 ft
- **B** 29 ft
- **C** 60 ft
- **D** 75 ft

Question 5.

Triangles ABE, ADE, and CBE are shown on the coordinate grid, and all the vertices have coordinates that are integers.



Which statement is true?

- **A** No two triangles are congruent.
- **B** Only $\triangle ABE$ and $\triangle CBE$ are congruent.
- **C** Only $\triangle ABE$ and $\triangle ADE$ are congruent.
- **D** Triangle ABE, $\triangle ADE$, and $\triangle CBE$ are all congruent.

Question 6.

The lengths of two sides of a triangle are 24 inches and 43 inches. What is the range of possible lengths, in inches, for the third side, x, of this triangle?

$\square < x < \square$

9	19	20	24	30	33.5	67	101.5

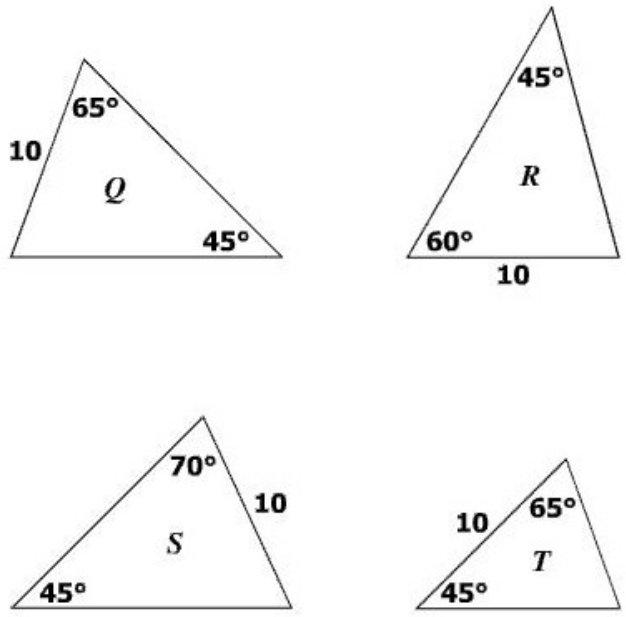
Question 7.

Which of the following sets of lengths can represent the measures of the sides of a right triangle?

- **A** 4, 5, 6
- **B** 5, 12, 15
- **C** 8, 10, 17
- **D** 20, 21, 29

Question 8.

Given the measures shown in the diagram, which two triangles are congruent?



- **A** Q and S
- **B** R and T
- **C** R and S
- **D** Q and T

Question 9.

Part of a marching band formed a triangle made with trumpet players on one side, clarinet players on one side, and flute players on the third side.

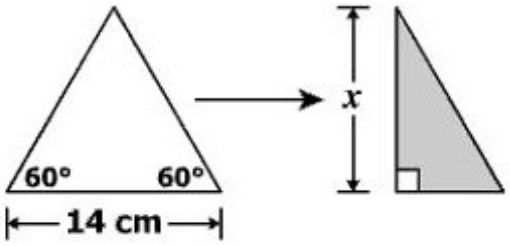
- **The angle formed by the trumpet and flute players measured 45°.**
- **The angle formed by the flute and clarinet players measured 68°.**

Which orders the sides of this triangle from least to greatest using the instrument names?

- **A** Clarinet, trumpet, flute
- **B** Clarinet, flute, trumpet
- **C** Trumpet, flute, clarinet
- **D** Flute, trumpet, clarinet

Question 10.

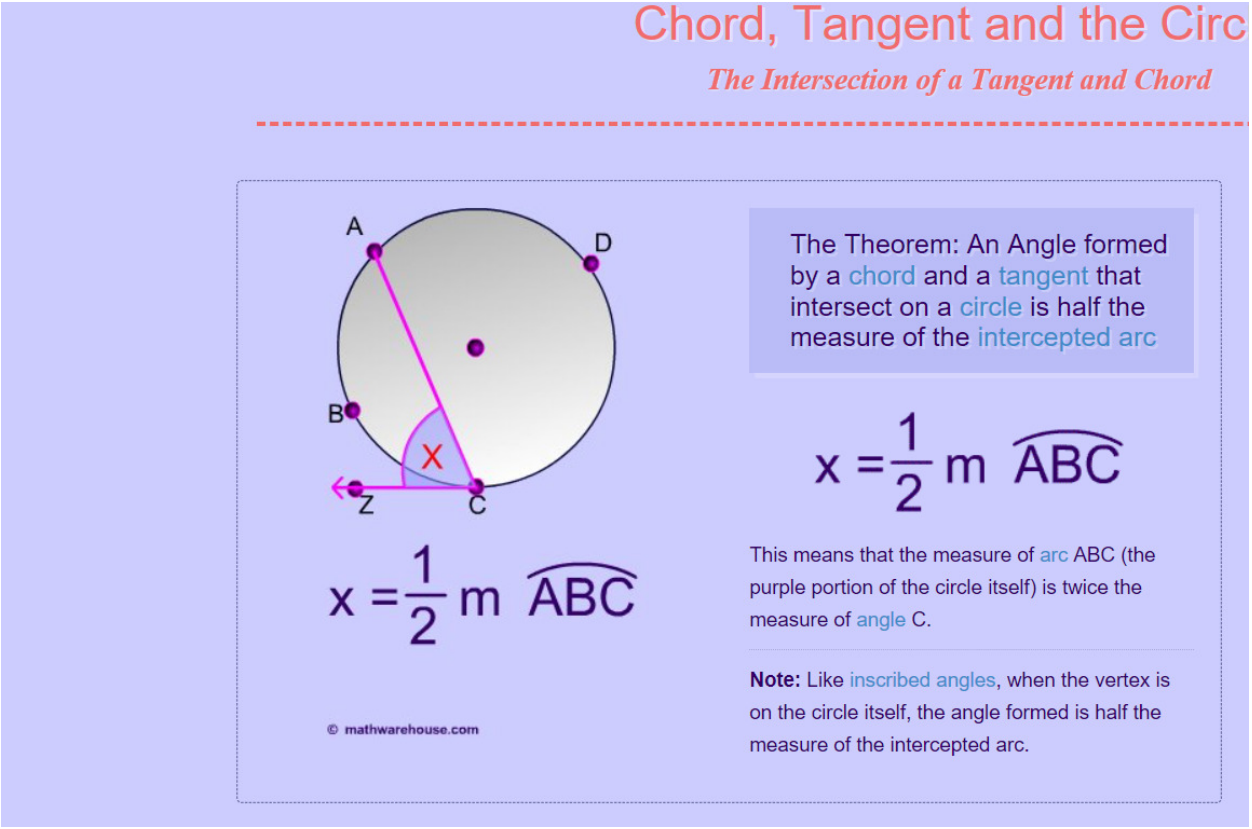
An equilateral triangle is folded in half.



What is x, the height of the equilateral triangle?

- **A** $14\sqrt{3}$ cm
- **B** 14 cm
- **C** $7\sqrt{3}$ cm
- **D** 7 cm

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