

The side lengths of a triangle are 6 centimeters, 9 centimeters, and $\sqrt{115}$ centimeters.
Is this triangle a right triangle?

Apply the Converse of the Pythagorean Theorem. $a^2 + b^2 \stackrel{?}{=} c^2$

The longest side is $\sqrt{115}$. Substitute this value for c . $6^2 + 9^2 \stackrel{?}{=} (\sqrt{115})^2$

The other two sides are $a = 6$ and $b = 9$. $36^2 + 81^2 \stackrel{?}{=} (\sqrt{115})^2$

The triangle is not a right triangle. $117 \neq 115$

The side lengths of a triangle are 8 inches, 11 inches, and $\sqrt{185}$ inches.
Is this triangle a right triangle? Explain.

1. Which side lengths are a , b , and c ?

$a =$ $\quad b =$ $\quad c =$

2. Apply the Converse of the Pythagorean Theorem.

$$\begin{array}{rcl}
 a^2 & + & b^2 & \stackrel{?}{=} & c^2 \\
 \square^2 & + & \square^2 & \stackrel{?}{=} & \square^2 \\
 \square & + & \square & \stackrel{?}{=} & \square \\
 & & \square & \stackrel{?}{=} & \square
 \end{array}$$

3. Is the triangle a right triangle? Explain.

On the Back!

4. A triangle has side lengths 1.2 meters, 1.6 meters, and 2 meters.
Is this triangle a right triangle? Explain.