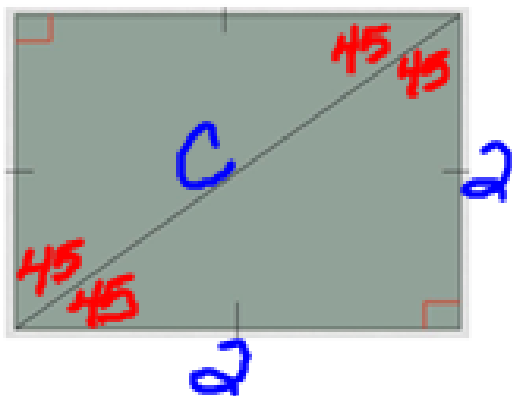


Special Right Triangles

45-45-90



$$2^2 + 2^2 = c^2$$

$$4 + 4 = c^2$$

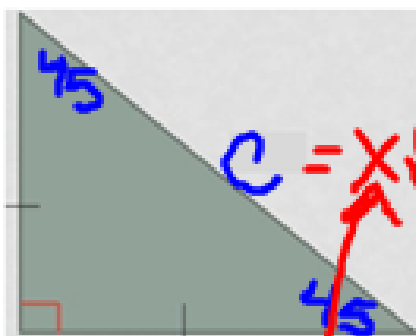
$$\sqrt{8} = \sqrt{c^2}$$

$$\sqrt{2} \sqrt{4}$$

$$2\sqrt{2}$$

$$\sqrt{2} \sqrt{2}$$

X 3



$$3^2 + 3^2 = c^2$$

$$9 + 9 = c^2$$

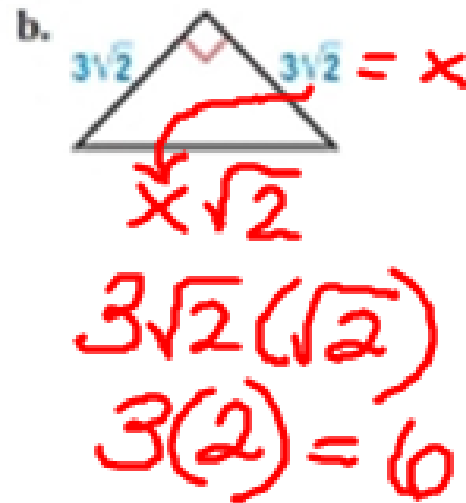
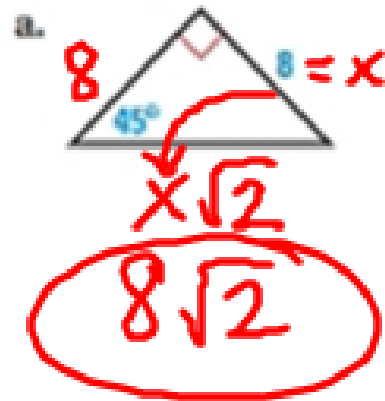
$$\sqrt{18} = \sqrt{c^2}$$

$$\sqrt{9} \sqrt{2}$$

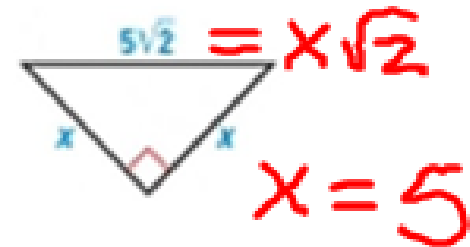
$$3\sqrt{2}$$

$$\sqrt{3} \sqrt{3}$$

Find the length of the hypotenuse.

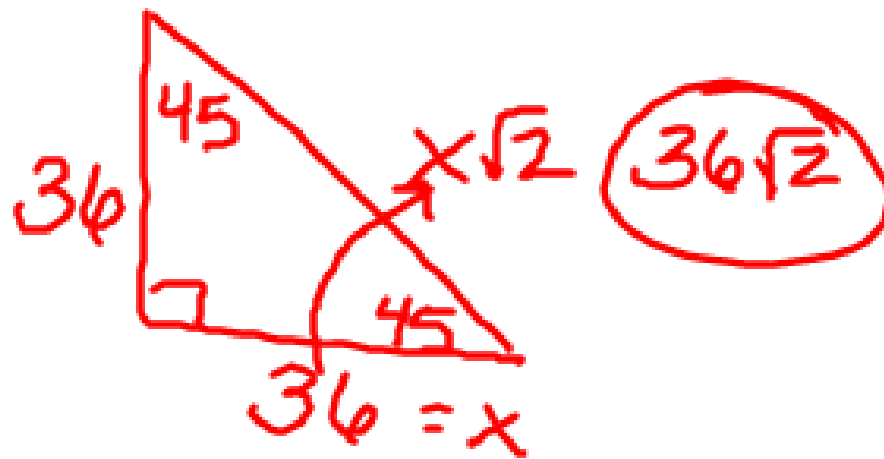


Find the lengths of the legs in the triangle.



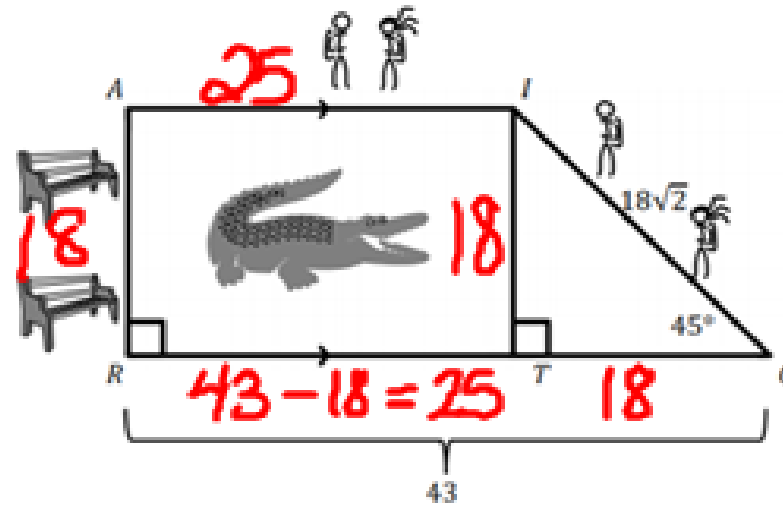
You try:

The Tilley household wants to build a patio deck in the shape of a  $45^\circ - 45^\circ - 90^\circ$  triangle in a nice corner section of their backyard. They have enough room for a triangular deck with a leg measuring 36 feet. What will the length of the longest side be?



**BEAT THE TEST!**

1. Consider the drawing below.

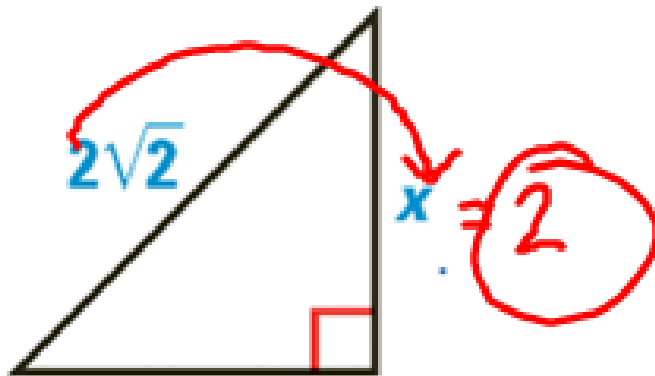


Part A: What is the perimeter of the figure?

$$43 + 18 + 25 + 18\sqrt{2}$$
$$86 + 18\sqrt{2} \text{ or } 111.5$$

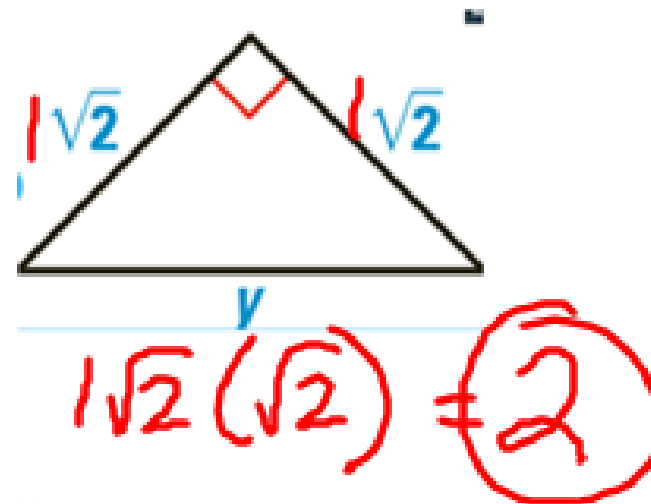
Part B: Write a 3-sentence long short story about the drawing and the calculations made in Part A.

You try. Find the value of  $x$  on this Isosceles Right Triangle.



You try:

Find the value of  $y$  on this Right Isosceles Triangle



You try:

Find the value of the diagonal of the square below.

