

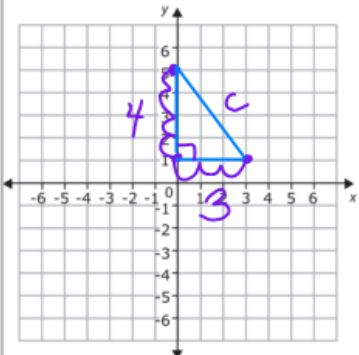
# Pythagorean Theorem (3-8)

## Example 1: Finding Length

Find the missing length to the nearest hundredth.

I Do

Find the length of the unknown side of the right triangle with the following coordinates: (3, 1), (0, 5), (0, 1).



$$a^2 + b^2 = c^2$$

$$3^2 + 4^2 = c^2$$

$$9 + 16 = c^2$$

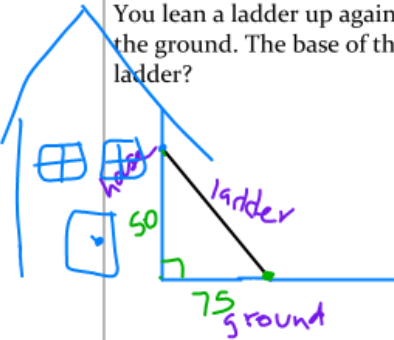
$$\sqrt{25} = \sqrt{c^2}$$

$$5 = c$$

## Example 2: Finding Length

I Do

You lean a ladder up against your home. The top of the ladder is 50 ft. from the ground. The base of the ladder is 75 ft. from the home. How long is the ladder?



$$a^2 + b^2 = c^2$$

$$50^2 + 75^2 = c^2$$

$$2500 + 5625 = c^2$$

$$\sqrt{8125} = \sqrt{c^2}$$

$$90.1 \text{ ft} = c$$