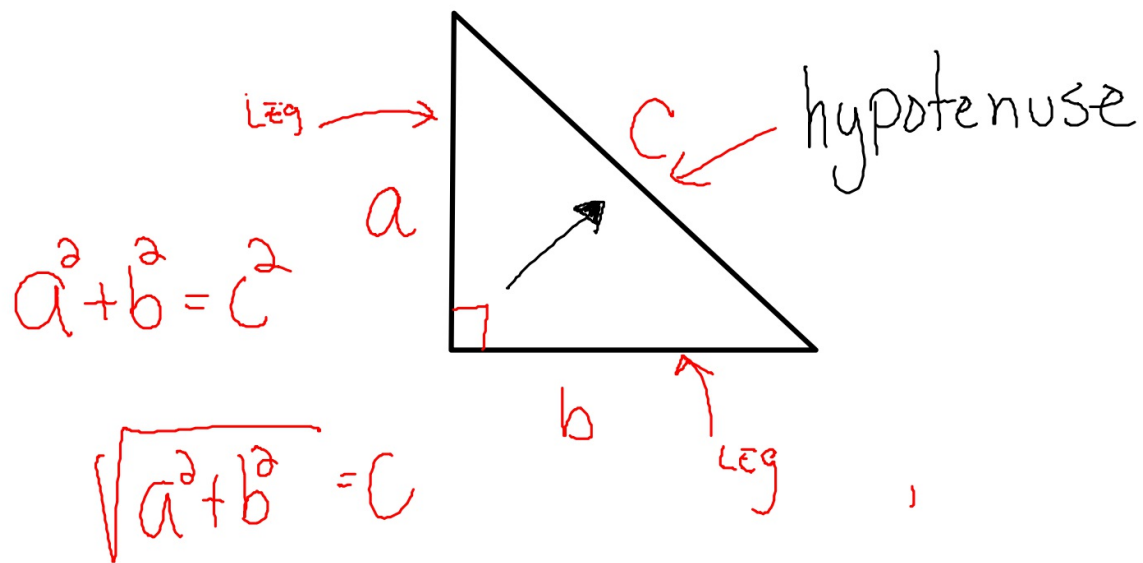
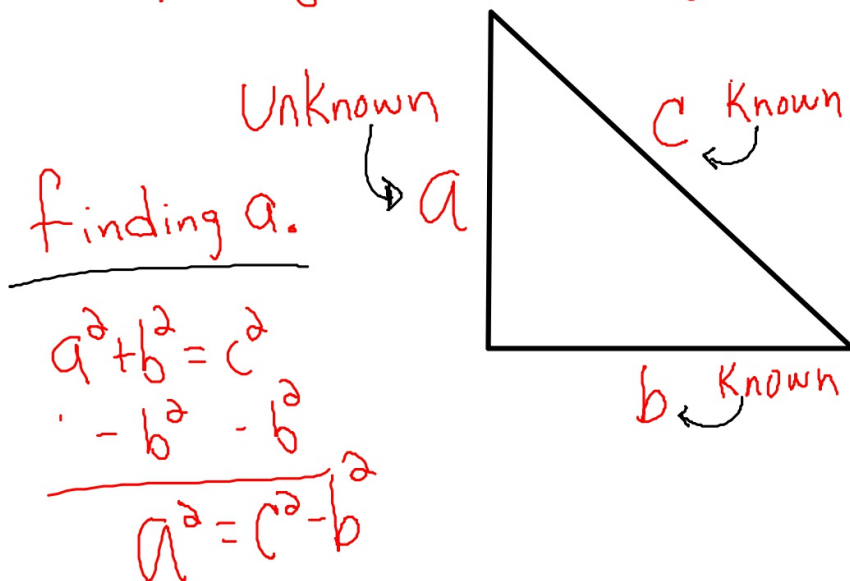


# 7.1 Applying the Pythagorean Theorem



## Applying the Pythagorean Theorem

finding missing legs.



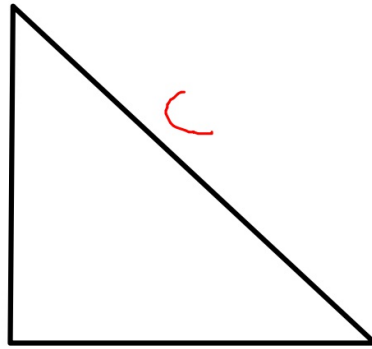
$$a = \sqrt{c^2 - b^2}$$

## Applying the Pythagorean Theorem

finding b

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

$$\begin{array}{r} -a^2 \\ \hline b^2 = c^2 - a^2 \end{array}$$

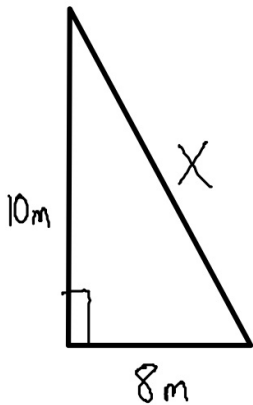


b ← Unknown

$$b = \sqrt{c^2 - a^2}$$

## Applying the Pythagorean Theorem

Find x.

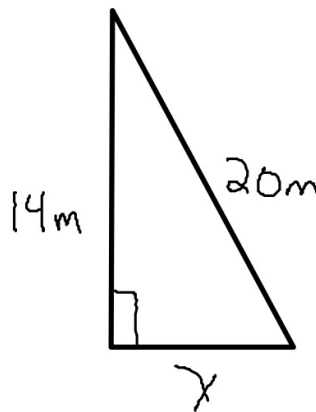


$$10^2 + 8^2 = x^2$$

$$\begin{array}{r} 100 + 64 \\ \hline 164 = x^2 \end{array}$$

$$\sqrt{164} = x$$

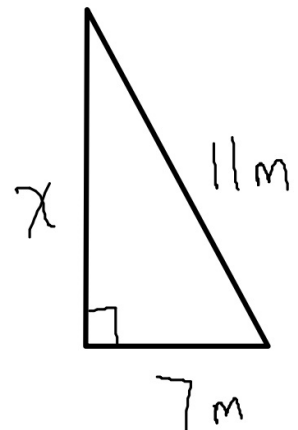
$$x = 12.8$$



$$20^2 - 14^2 = x^2$$

$$\begin{array}{r} 400 - 196 \\ \hline 204 = x^2 \end{array}$$

$$\sqrt{204} = 14.3$$



$$11^2 - 7^2 = x^2$$

$$\begin{array}{r} 121 - 49 \\ \hline 72 = x^2 \end{array}$$

$$\sqrt{72} = 8.5$$

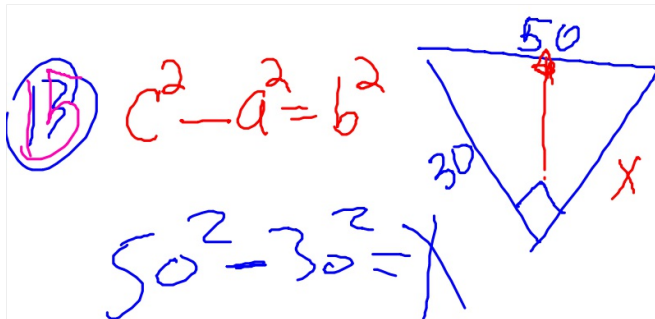
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Worksheet

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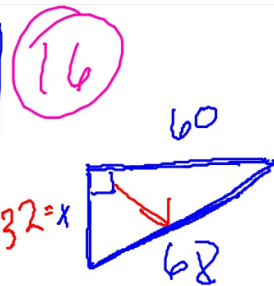


$$2500 - 900 =$$

$$\sqrt{1600} = \sqrt{x^2}$$

$$40 = x$$

My friend  
Faw student  
MR. Cain



$$68^2 - 60^2 =$$

$$4624 - 3600 =$$

$$1024 = x^2$$

$$\sqrt{1024} = 32$$