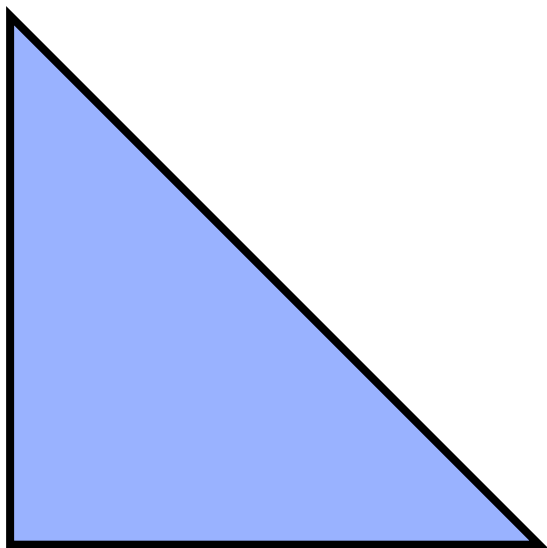
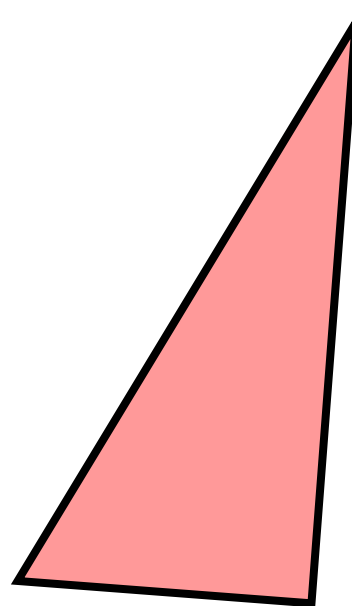


**45°-45°-90°  
Triangle Theorem**

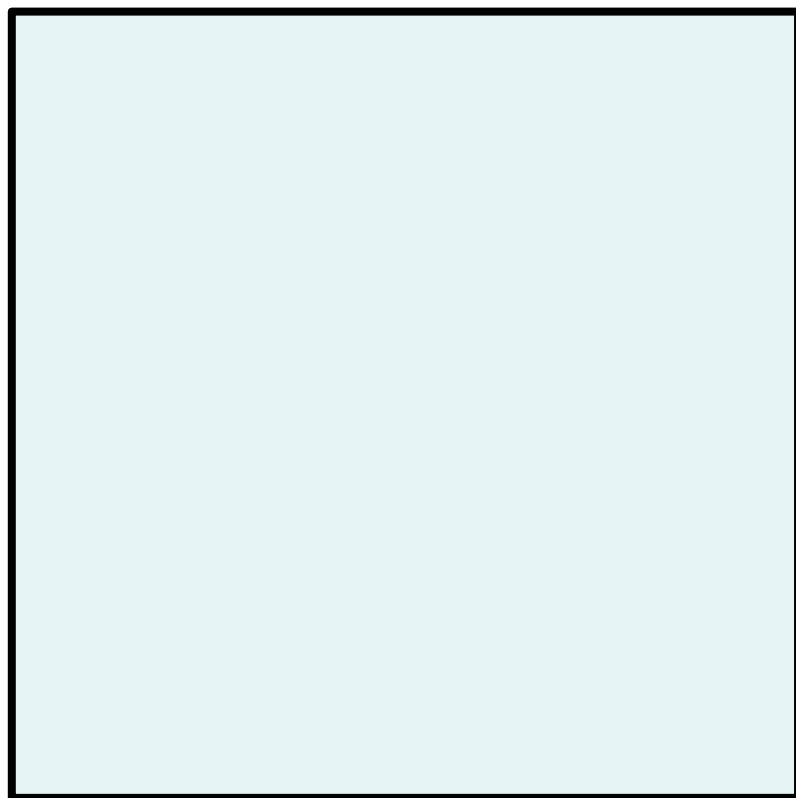


**30°-60°-90°  
Triangle Theorem**



<b>45°</b>	0.7071	0.7071	1.0000
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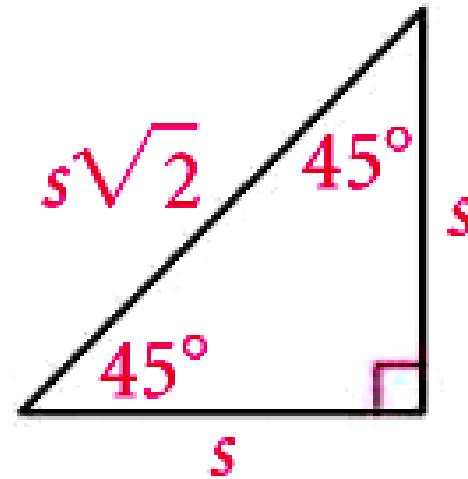
<b>30°</b>	0.5000	0.8660	0.5774
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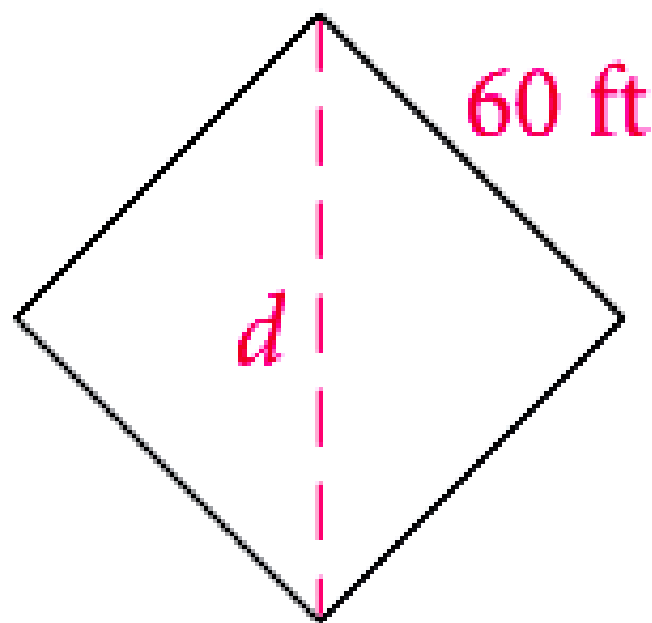
<b>45°</b>	0.7071	0.7071	1.0000
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$$\text{hypotenuse} = \sqrt{2} \cdot \text{leg}$$

## **45°-45°-90° Triangle Theorem**



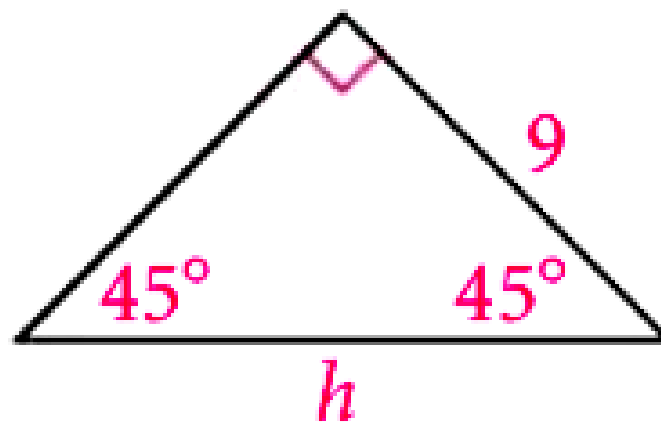
**Softball** A high school softball diamond is a square. The distance from base to base is 60 ft. To the nearest foot, how far does a catcher throw the ball from home plate to second base?



Find the value of each variable.

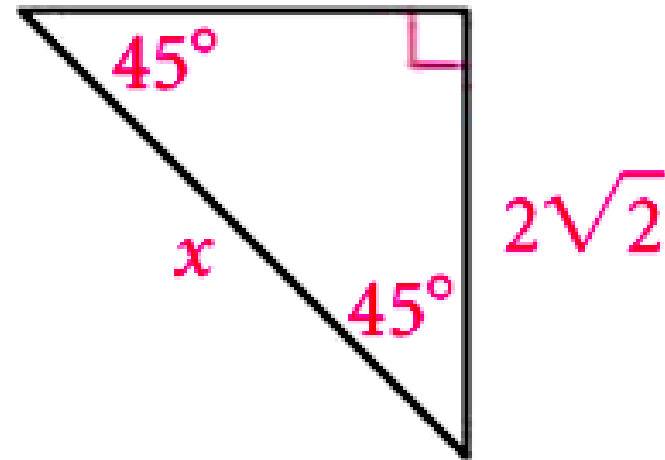
**$45^\circ$ - $45^\circ$ - $90^\circ$**

**Triangle Theorem**



Find the value of each variable.

**$45^\circ$ - $45^\circ$ - $90^\circ$   
Triangle Theorem**



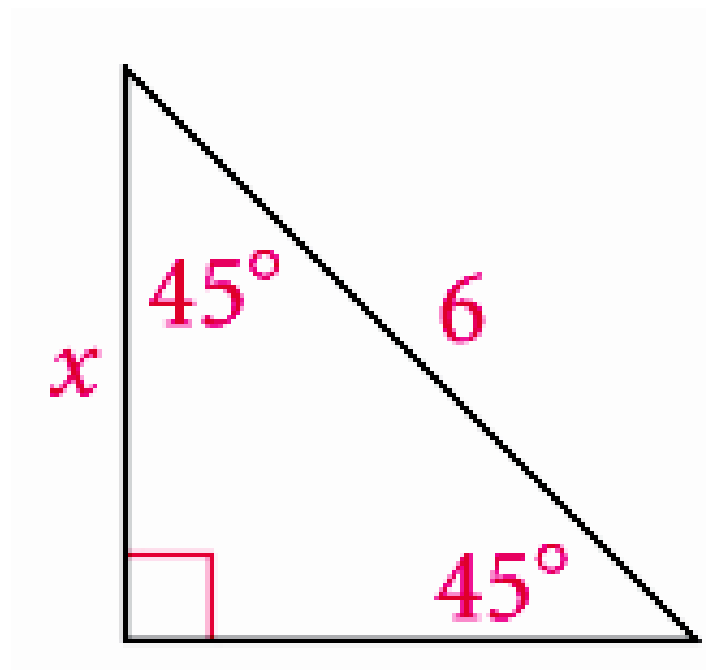
**Multiple Choice** What is the value of  $x$ ?

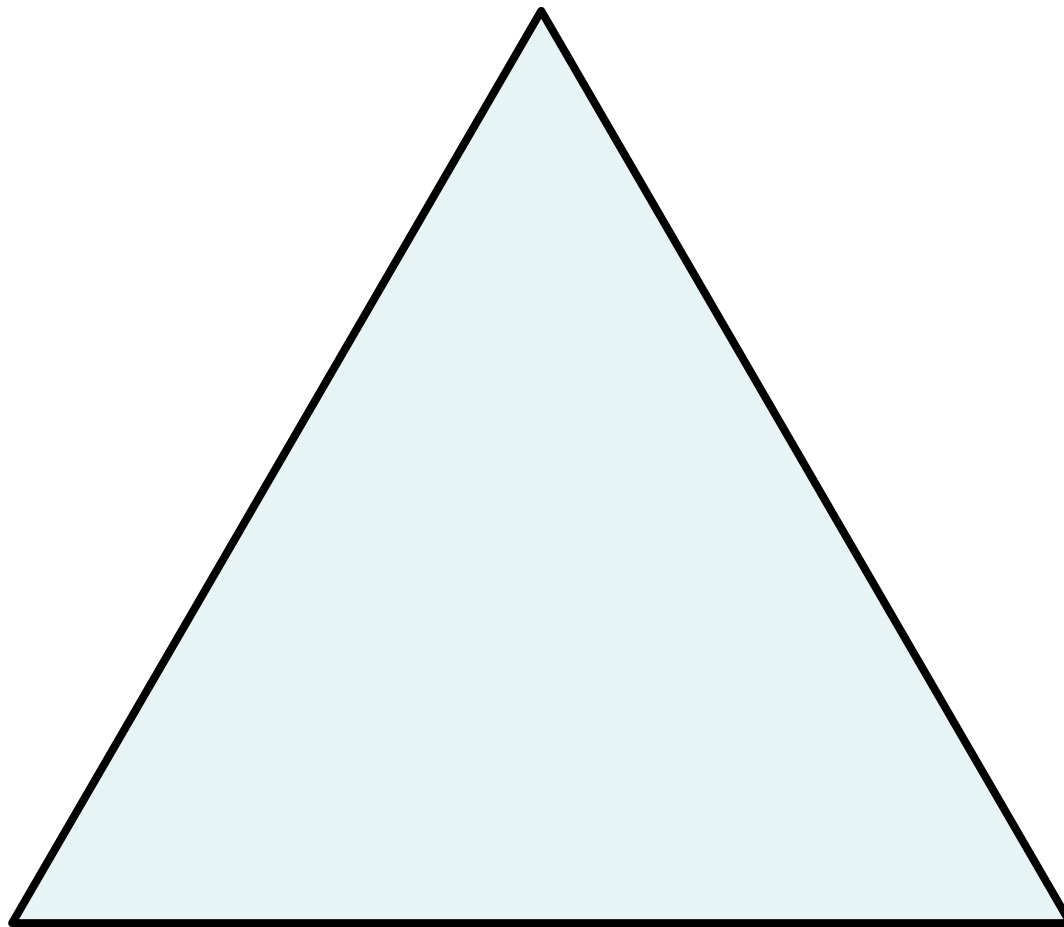
(A) 3

(B)  $3\sqrt{2}$

(C) 6

(D)  $6\sqrt{2}$





**30°**

0.5000

0.8660

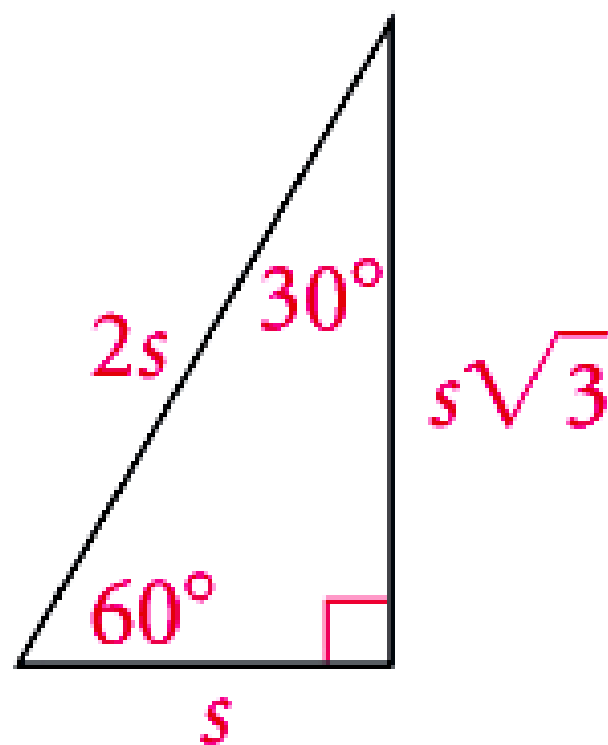
0.5774



**30°-60°-90°  
Triangle Theorem**

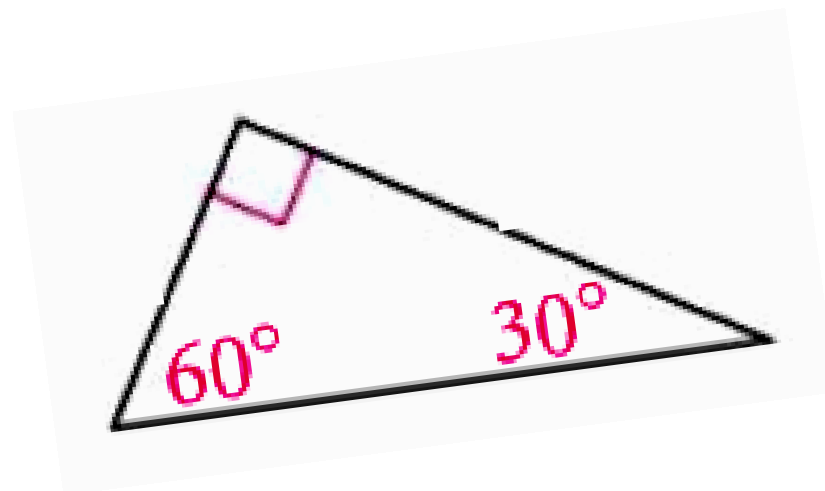
hypotenuse =  $2 \cdot$  shorter leg

longer leg =  $\sqrt{3} \cdot$  shorter leg

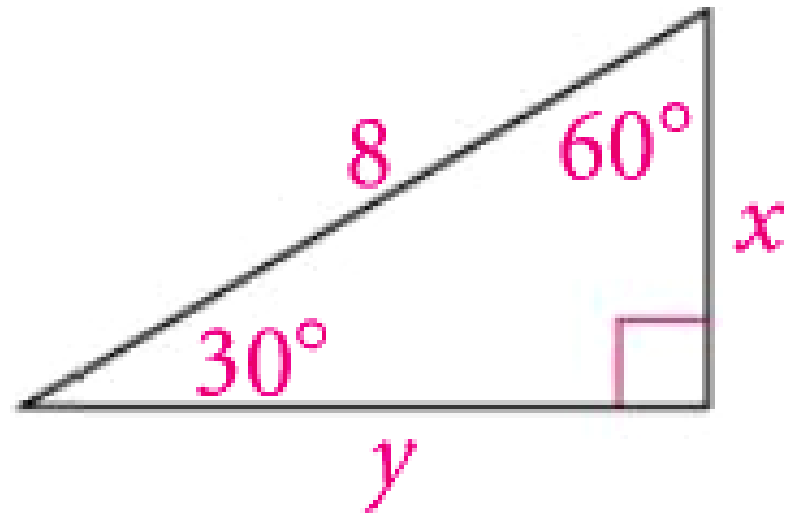


**$30^\circ$ - $60^\circ$ - $90^\circ$**

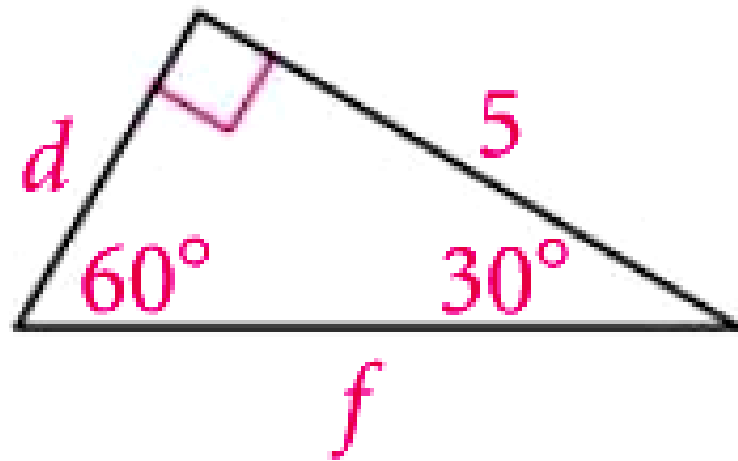
**Triangle Theorem**



## Using the Length of One Side

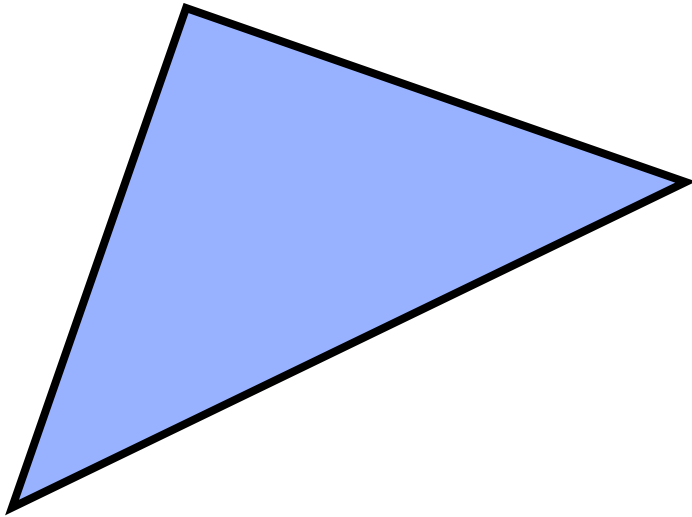


## Using the Length of One Side



**$45^\circ$ - $45^\circ$ - $90^\circ$**

**Triangle Theorem**



**$30^\circ$ - $60^\circ$ - $90^\circ$**

**Triangle Theorem**

