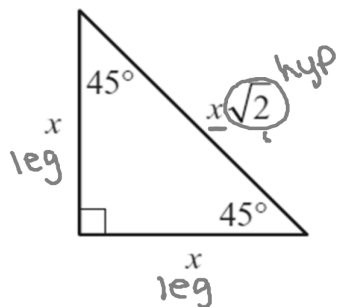


## Let's Come Up With Some Formulas (shortcuts)

### 45°-45°-90° Triangle



$$\text{hyp} = \text{leg} (\sqrt{2})$$

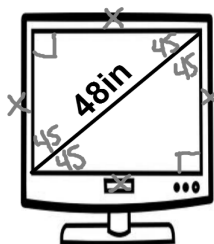
$$\text{Leg} = \frac{\text{hyp}}{\sqrt{2}}$$

Page 2

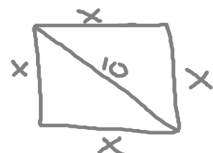
## Practice Problems:

4. A 48-inch wide screen television means that the measure along the diagonal is 48 inches. If the screen is a square, what are the dimensions of the length and width?

$$\frac{48}{\sqrt{2}} = 24\sqrt{2} \text{ inches}$$



5. The diagonal of a square is 10 inches. Find the length of a side.

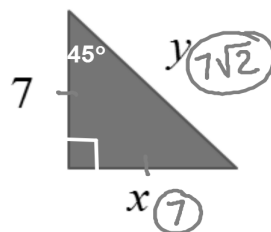


$$x = \frac{10}{\sqrt{2}} = 5\sqrt{2} \text{ inches}$$

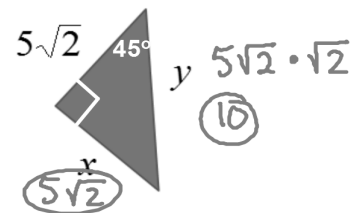
Page 4

## Find the Missing Side:

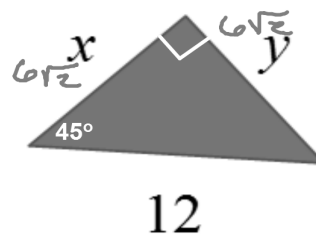
1.



3.



2.



$$\begin{aligned} x &= y \\ &= \frac{12}{\sqrt{2}} \\ &= 6\sqrt{2} \end{aligned}$$

Page 3

## 30° - 60° - 90° Triangles

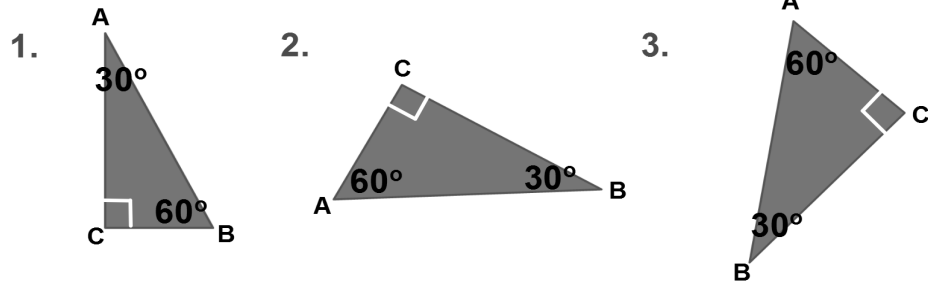
**Hypotenuse** - The longest side of the triangle, also the side that is across from the right angle. (Hyp)

**Short Leg** - The shortest side of a triangle. (SL)

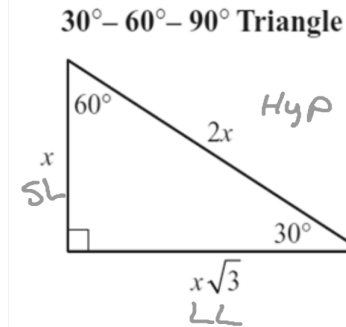
**Long Leg** - The longest side of a triangle that is not the hypotenuse. (LL)

Page 5

Label the sides of the 30° - 60° - 90° Triangle:



Let's Come Up With Some Formulas (shortcuts)



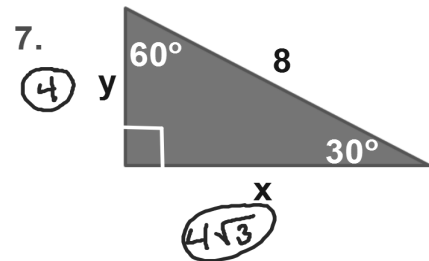
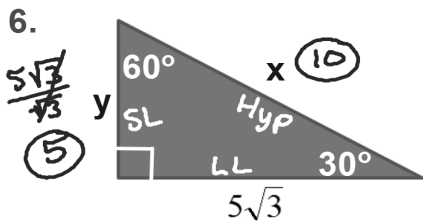
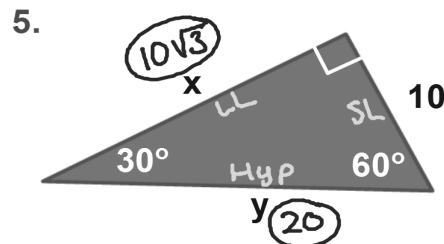
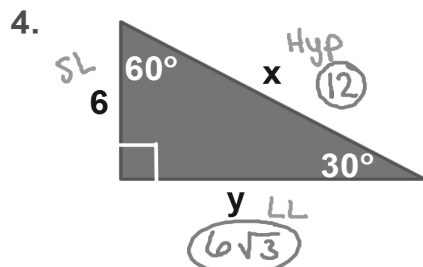
$$\text{hyp} = \text{SL}(2)$$

$$\text{SL} = \frac{\text{Hyp}}{2}$$

$$\text{SL} = \frac{\text{LL}}{\sqrt{3}}$$

$$\text{LL} = \text{SL}(\sqrt{3})$$

Find the Missing Side:



Find the Missing Side:

