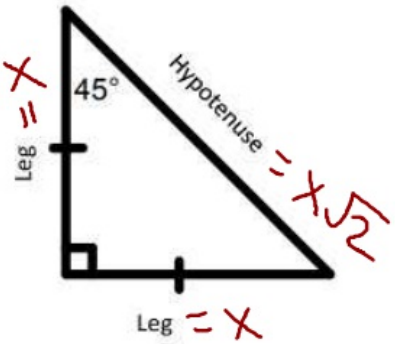
Name: _____ Hour: _____ Date: _____

HONORS – Special Right Triangles Practice

Special Right Triangle Patterns:

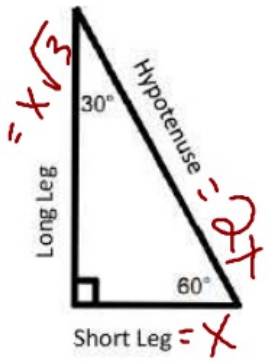
45-45-90



Hypotenuse = Leg · √2

Leg = Hyp / √2

30-60-90



Hyp = SL · 2

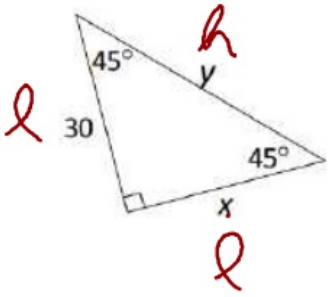
Long Leg = SL · √3

Short Leg = Hyp / 2 **OR** **Short Leg =** LL / √3

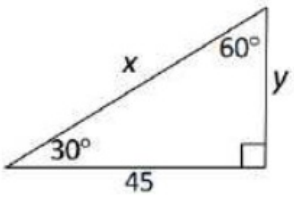
Practice Problems

DIRECTIONS: Using the patterns for Special Right Triangles, find the missing side length(s) of each of the following triangles.

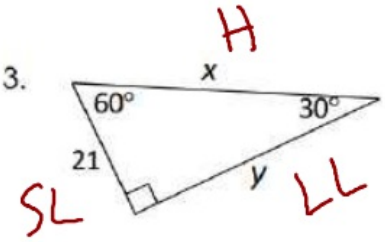
1.



2.

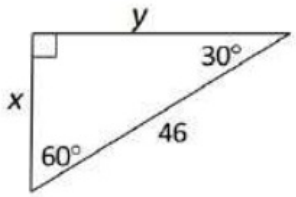


3.



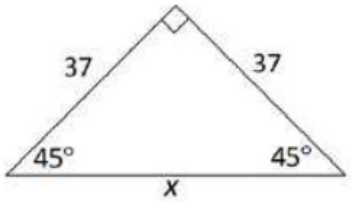
x = 30 y = 30√2 x = _____ y = _____ x = 42 y = 21√3

4.



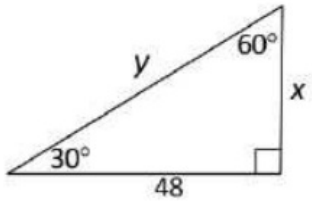
x = _____ y = _____

5.



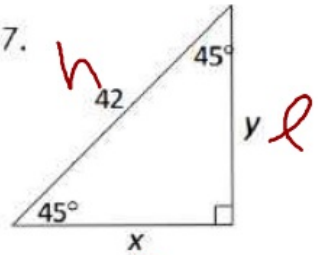
x = _____

6.



x = _____ y = _____

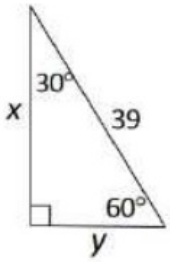
7.



$$\frac{42}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{42\sqrt{2}}{\sqrt{4}} = \frac{42\sqrt{2}}{2} = 21\sqrt{2}$$

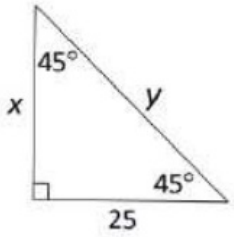
x = $21\sqrt{2}$ y = $21\sqrt{2}$

8.



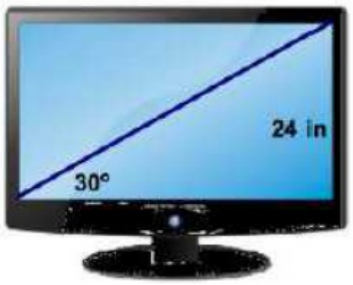
x = _____ y = _____

9.



x = _____ y = _____

10) The size of a television is determined by the length of its diagonal. Determine the size of this television.



11) The perimeter of a square is 28 cm. What is the length of its diagonal?