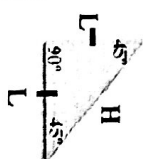
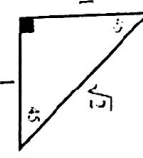


Right Triangle Review – Special Right Triangles

* 45°-45°-90° (Isosceles Right Triangle)

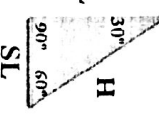
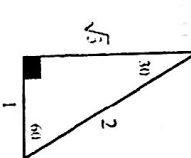
Pattern Formulas

(you do not need to memorize these formulas as such, but you do need to memorize the patterns)

 <p>H = hypotenuse L = leg</p>	$H = L\sqrt{2}$	
	$L = \frac{1}{2}H\sqrt{2}$	

(you do not need to memorize these formulas as such, but you do need to memorize the relationships)

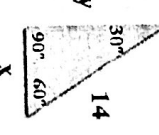
* 30°-60°-90° Triangle Pattern Formulas

	Labeling:	
	<p>H = hypotenuse LL = long leg (across from 60°) SL = short leg (across from 30°)</p>	

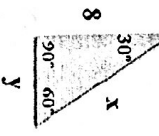
Short Cut Pattern Formulas:

short leg:	$SL = \frac{1}{2}H$	You must remember that these formula patterns can be used ONLY in a 30°-60°-90° triangle.
long leg:	$LL = \frac{1}{2}H\sqrt{3}$	
combining the first two:	$LL = SL\sqrt{3}$	

Example 1:

	x is the short leg	y is the long leg
	$SL = \frac{1}{2}H$ $x = \frac{1}{2} \cdot 14$ $x = 7$ Answer	$LL = \frac{1}{2}H\sqrt{3}$ $y = \frac{1}{2} \cdot 14\sqrt{3}$ $y = 7\sqrt{3}$ Answer

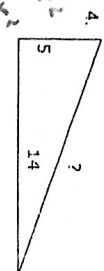
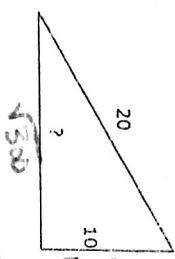
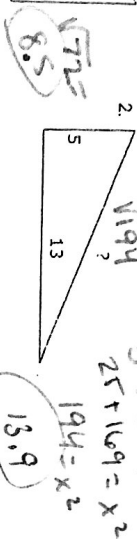
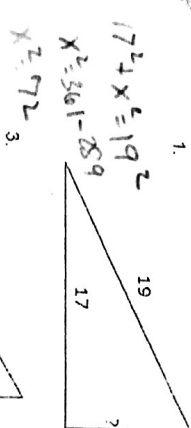
Example 2:

	8 is the long leg and x is the hypotenuse (start with what you have given)	y is the short leg
	$LL = \frac{1}{2}H\sqrt{3}$ $8 = \frac{1}{2}x\sqrt{3}$ $16 = x\sqrt{3}$ $\frac{16}{\sqrt{3}} = x$ $x = 9.24$ Answer	$SL = \frac{1}{2}H$ $y = \frac{1}{2}(9.24)$ $y = 4.62$ Answer

(L)

LAGOREAN THEOREM

For each triangle find the missing length. Round your answer to the nearest tenth.

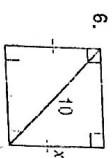
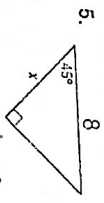
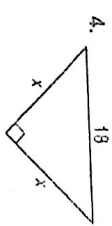
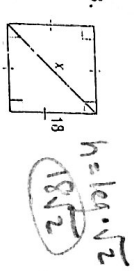
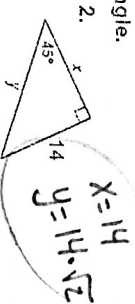
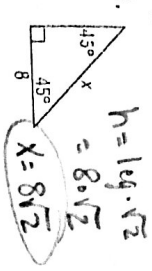


Special Right Triangles: 45° - 45° - 90°

Hypotenuse = Leg * $\sqrt{2}$

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

Find the value of x in each triangle.

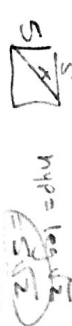


Sketch the figure that is described. Find the requested measure.

7. The perimeter of a square is 48 meters. Find the length of a diagonal.



8. The perimeter of a square is 20 cm. Find the length of a diagonal.



Special Right Triangles: 30° - 60° - 90°

Hypotenuse = 2 * Short Leg

Long Leg = Short Leg * $\sqrt{3}$

Long Leg = $\frac{1}{\sqrt{3}}$ hyp $\sqrt{3}$

Find the value of x and y in each triangle.

