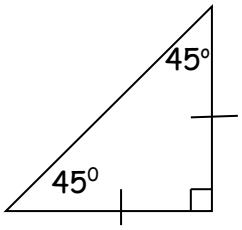
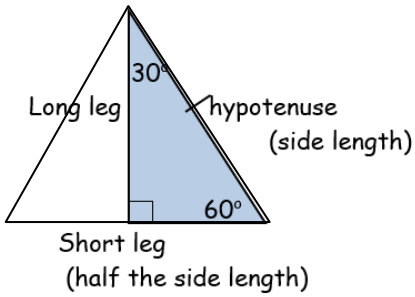
AA8-0 Investigation Name_____
Special Right Triangles Review

In geometry you learned about two special right triangles.

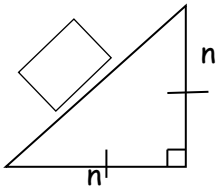
(1) right isosceles triangles
(aka, a 45°- 45°-90° triangle)

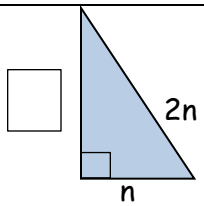


(2) half an equilateral triangle
(aka, a 30° -60° -90° triangle)

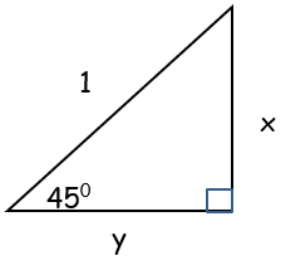


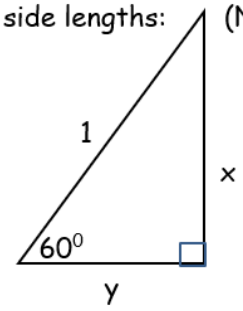
Using the Pythagorean Theorem, solve for the missing side lengths. Leave answers in reduced radical form. (no decimals)

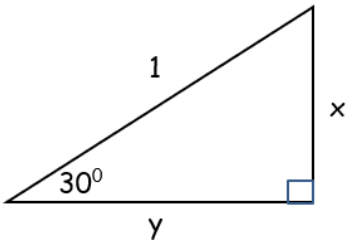
Leg	Leg	Hypotenuse
1	1	
2	2	
3	3	
4	4	
5	5	
n	n	

Hyp.	short leg	Long leg
2	1	
4	2	
6		
8		
10		
2n	n	

Use the pattern to find the missing side lengths: (No decimals and don't be rude.)



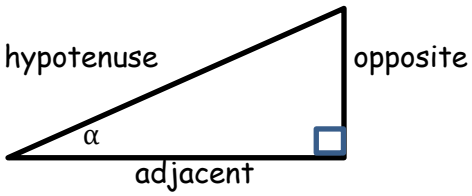




Right triangle trigonometry Review.

To solve for a missing side of a right triangle:

Step 1: Label the sides of the triangle.

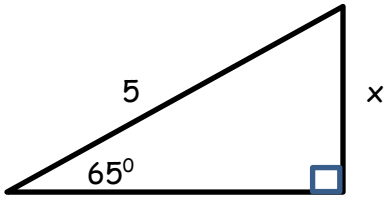


Step 2: Write a trigonometric Equation. Remember:pp

SOH	CAH	TOA
$\sin \propto = \frac{opp}{hyp}$	$\cos \propto = \frac{adj}{hyp}$	$\tan \propto = \frac{opp}{adj}$

Step 3: Solve. Make sure your calculator is in degree mode.

Example:



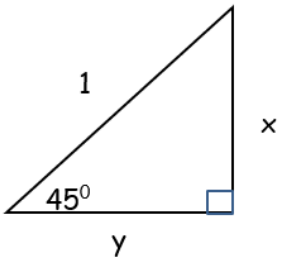
$\sin 65^0 = \frac{x}{5}$

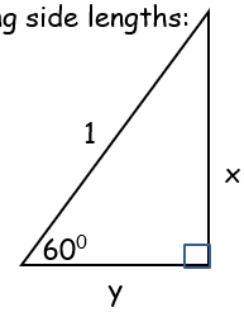
$5 \sin 65^0 = x$

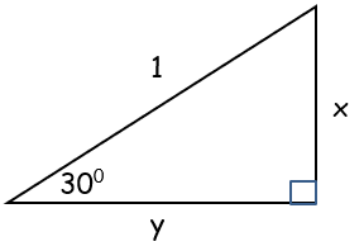
$5(0.906) = x$

$4.532 \text{ units} = x$

Use trigonometry to find the missing side lengths: (use a separate piece of paper)







Complete the table with the results:

	Trigonometry			Pythagorean theorem		
Angle	Opposite	Adjacent	Hypotenuse	Opposite	Adjacent	Hypotenuse
45^0			1			1
60^0			1		$\frac{1}{2}$	1
30^0			1	$\frac{1}{2}$		1