Right Angle Trig Analysis Name_____
(4.2) Date_____

RIGHT TRIANGLE

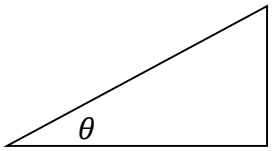
Greek letters such as: _____, alpha; β , _____ ; _____ , theta; _____, gamma are used to represent angles.

The Pythagorean Theorem is used to show the relationship between the sides of a right triangle.

_____, where a and b are the legs and c is the hypotenuse of the triangle.

The 6 Trigonometric Functions are ratios of the sides of a right triangle with respect to an angle of triangle. These functions are: sine, cosine, tangent, cosecant, secant, cotangent.

LABEL the sides of the right triangle with respect to θ. Then write the ratios of the 6 trig functions with respect to θ .

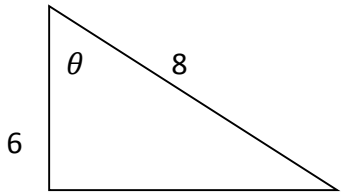


sin θ = csc θ =

cos θ = sec θ =

tan θ = cot θ =

Ex 1: Find the length of the missing side of the triangle. Then find the values of the 6 trig functions of θ .

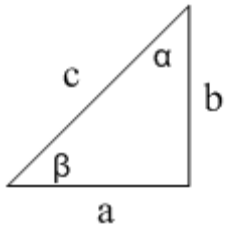


sin θ = cos θ = tan θ =

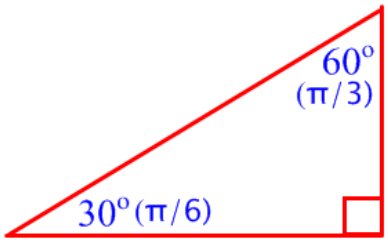
csc θ = sec θ = cot θ =

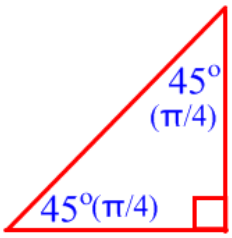
Ex 2: Refer to the right triangle diagram below and the given information to solve the right triangle. Round answers to 3 decimal places.

2. $\alpha = 65° \; and \; c = 37 \; ft$



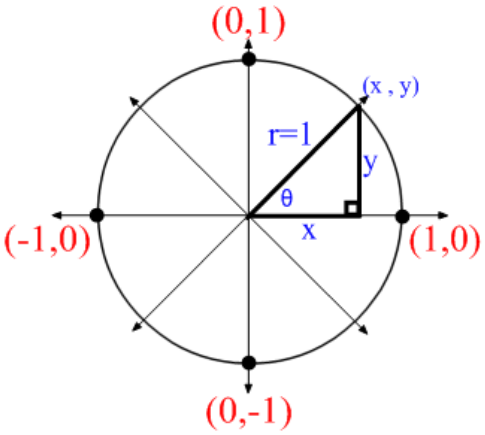
*Label the sides of the special triangles below. Then fill the table of trig ratios based on the triangles.





	30^0 $(\pi/6)$	60^0 $(\pi/3)$	45^0 $(\pi/4)$
sinθ			
cosθ			
tanθ			
cscθ			
secθ			
cotθ			

*Use the coordinates of the Unit Circle to fill in the table of trig ratios for the quadrantal angles.



	0^o (0)	90^0 $(\pi/2)$	180^0 (π)	270^0 $(3\pi/2)$	360^0 (2π)
sinθ					
cosθ					
tanθ					
cscθ					
secθ					
cotθ					