UNIT 5 – LESSON 2 **Solving with Trigonometry Ratios**

First….Complete the chart!!!

TRIG NAME	RATIO
sine	$\frac{opposite}{hypotenuse}$
cosine	$\frac{adjacent}{hypotenuse}$
tangent	$\frac{opposite}{adjacent}$

Ex 1) Find the requested side length in the figure.

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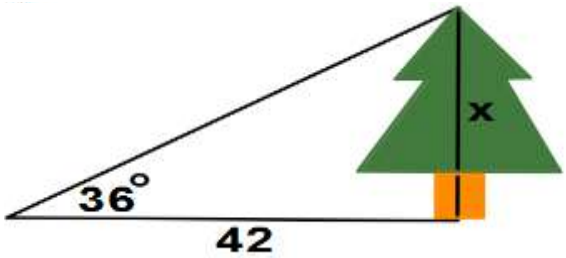


Determine what trig ratio is given in the diagram.

Tangent = opposite/adjacent

Tan 36® = $\frac{x}{42}$

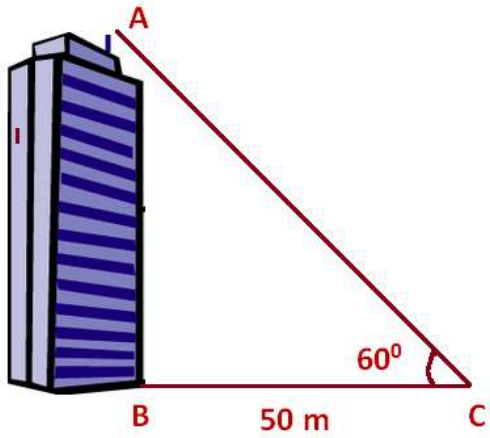
42 tan 36® = x

X = 30.51

YOU TRY!!!

1) Find the requested side length in the figure.

X

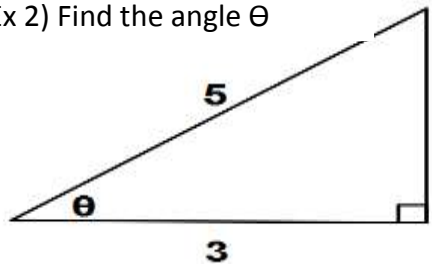


You can also use the trig. ratios to find the measure of an angle if you know the lengths of two sides of the right triangle.

To do this, you will need to remove the trig. function from the angle by using the functions:

$\cos^{-1}$ $\sin^{-1}$ $\tan^{-1}$

Ex 2) Find the angle Θ



Determine what trig ratio is given in the diagram.

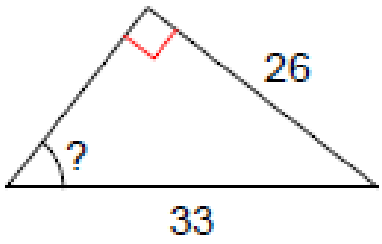
Cosine = adjacent/hypotenuse

$\cos \Theta^{-1} = \frac{3}{5}$

Θ = 53.13®

YOU TRY!!!

2) Find the angle Θ



You Try Answers. 1) x = 86.60 2) Θ = 51.98®