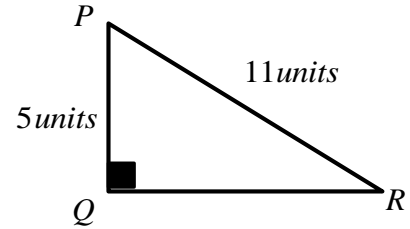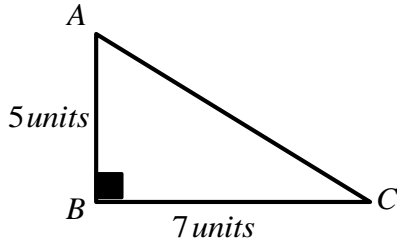Name: _____

Unit 5 – Trigonometry
5.3 – The Basic Trigonometric Ratios

Review

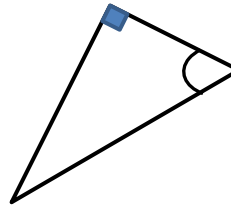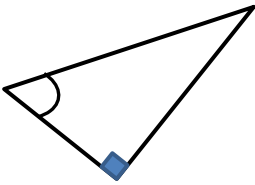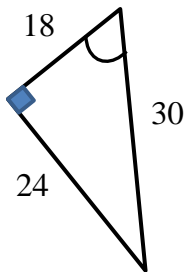1. Find the length of the missing sides on the triangles ABC and PQR:

2. Find the values of the following: a. $Sin(47°) =$ b. $Cos^{-1}\left(\dfrac{5}{12}\right) =$

3. Label the sides of the following triangles as **Hyp**, **Opp**, and **Adj** based on the given angles.

4. For the triangle given below, find the values of: $\dfrac{Opp}{Hyp}, \dfrac{Adj}{Hyp}, \dfrac{Opp}{Adj}$:

The 3 Basic Trigonometric Ratios

- For a **Right Triangle**, the values of $\dfrac{Opp}{Hyp}, \dfrac{Adj}{Hyp}, \dfrac{Opp}{Adj}$ can also be written in terms of *Sine*, *Cosine* and *Tan*.

- The angle used in the Sine, Cosine and Tan functions is the same angle used for naming the 3 sides.

$$Sin(\theta) = \frac{Length\ of\ Opposite}{Length\ of\ Hypotenuse} \qquad \text{or} \qquad Sin(\theta) = \frac{O}{H} \qquad \text{or} \qquad SOH$$

$$Cos(\theta) = \frac{Length\ of\ Adjacent}{Length\ of\ Hypotenuse} \qquad \text{or} \qquad Cos(\theta) = \frac{A}{H} \qquad \text{or} \qquad CAH$$

$$Tan(\theta) = \frac{Length\ of\ Opposite}{Length\ of\ Adjacent} \qquad \text{or} \qquad Tan(\theta) = \frac{O}{A} \qquad \text{or} \qquad TOA$$

Just remember: $SOH \quad CAH \quad TOA$

Examples

For each of the following triangles, find the values of $Sin(A), Cos(A), Tan(A)$: