PC11

The Law of Sines = Sine Law

Recall: When finding a degree measure of an angle, when the value of one of the basic trigonometric ratios is known, the **inverse** of the ratio must be used.

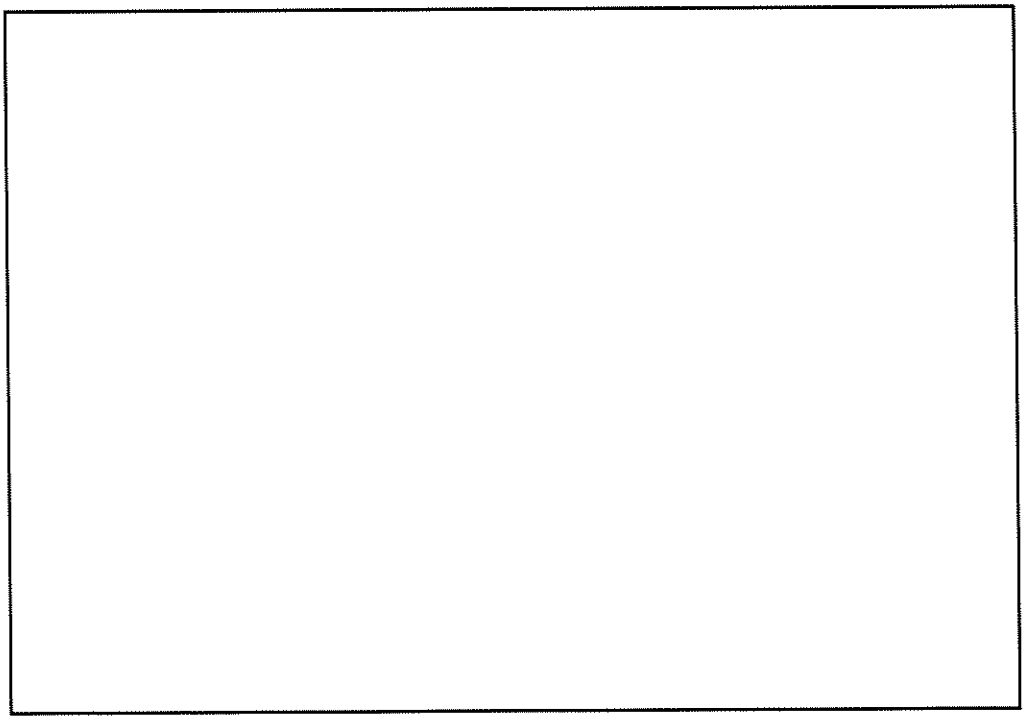
Example:

If $sin\theta = 0.5$ then $\theta = \sin^{-1}(0.5)$ and $\theta =$ _____

Using your calculator, find β given that $tan\beta = \frac{3}{2}$

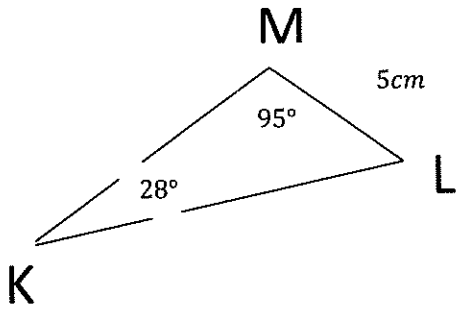
Sine Law is a rule that can be applied to any triangle in which one pair of **an angle and its opposite side is known** and **one more piece of information is known** – one other side length of one more angle measure. However, do not apply the Sine Law to a right-angled triangle – always use SOH-CAH-TOA for right-angled triangles.

The Law of Sines states:

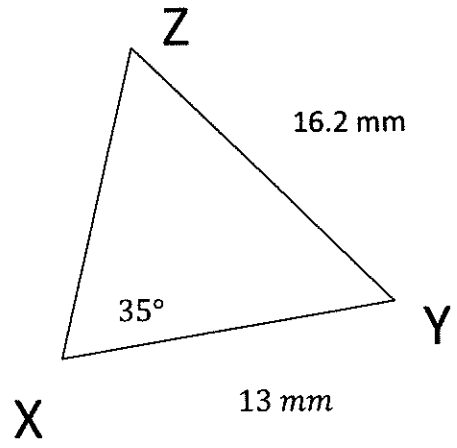


Always choose the version that will have the unknown in the numerator to allow for faster calculation.

Ex. 1: Find the unknown side lengths in the triangle KLM.



Ex.2: Find the unknown angles to the nearest degree.



Ex.3: Solve the triangle ABC.
Recall: to solve a triangle means to find all missing information about its side lengths and angles.