When we only have one side of a right triangle we are not able to solve for any other sides of the triangle.
This is where_____ was introduced. This is the study of angles and sides. We will look at
the _____ ratio first.

Before we use the Sin ratio we have to be able to label a triangle properly with it corresponding names. These
names are relative to what angle you are looking from.

Label the following triangles with _____, _____, _____
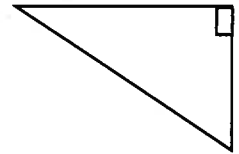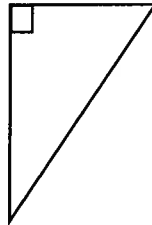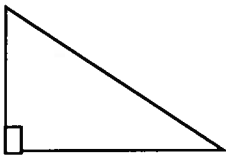
Use your calculator to find Sin ratios (4 decimal places). (Make sure its in DEG mode.)

Sin 34°=_____   Sin 71°=_____
Sin 45°=_____   Sin 83°=_____
Sin 56°=_____   Sin 90°=_____

The Sin Ratio. We can use the Sin ratio to solve for a missing side of a triangle if we know a certain angle in
that triangle.
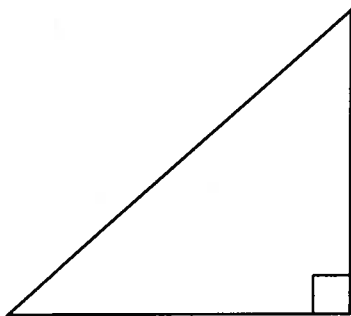
A

The Sin Ratio

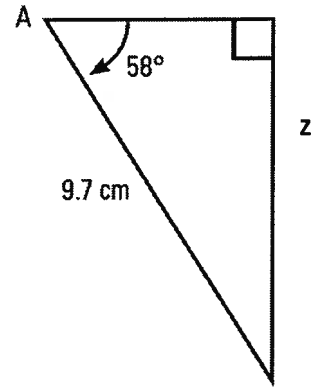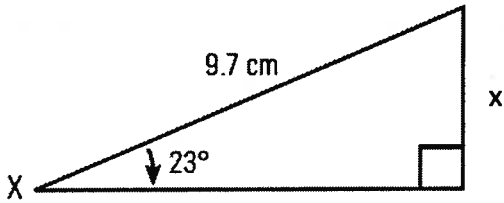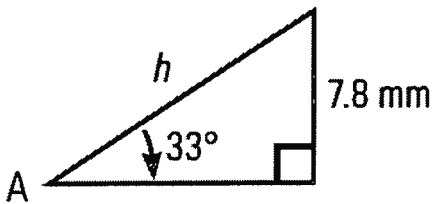**SOH**CAHTOA

Example 1: Find the missing side of the following triangles

9.7 cm

x

23°

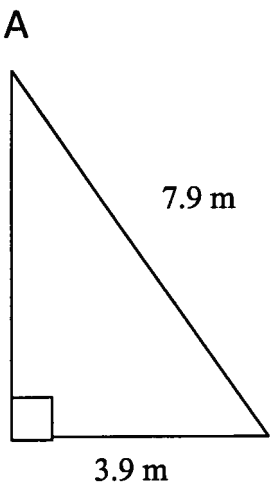X

A

58°

z

9.7 cm

Example 2: Find the length of the hypotenuse in the picture below.

h

7.8 mm

33°

A

Example 3:

Brad is building a ramp. The ramp must form an angle of 22° with the level ground and reach a point that is 1.5 meters above the ground. How long will the ramp be?

Example 4: Find the Sin ratio

A

7.9 m

3.9 m

Example 5: Find <A

4.8 in.

10.2 in.

8.5 in.

A