



Problem 1 – Investigation

Using the triangle on page 1.4, find the following ratios and trig values to one decimal place.

$$\frac{b}{a} = \underline{\hspace{2cm}} \quad \frac{b}{c} = \underline{\hspace{2cm}} \quad \frac{a}{c} = \underline{\hspace{2cm}}$$

$$\sin B = \underline{\hspace{2cm}} \quad \cos B = \underline{\hspace{2cm}} \quad \tan B = \underline{\hspace{2cm}}$$

On page 1.5, drag the trig function next to the ratio that it matches. Fill in the ratios below.

$$\sin B = \underline{\hspace{2cm}} \quad \cos B = \underline{\hspace{2cm}} \quad \tan B = \underline{\hspace{2cm}}$$

Problem 2 – Application

Fill in the table below for the ratios based on the triangle on page 2.1.

$$\sin B = \underline{\hspace{2cm}} \quad \cos B = \underline{\hspace{2cm}} \quad \tan B = \underline{\hspace{2cm}}$$

While these relationships may not seem all that important, they really are. One of the uses of trigonometry is finding the missing side lengths of a triangle.

Use the space on the next page to solve for the missing sides of three triangles.



Exploration of Trig Ratios

Use the sine, cosine, or tangent to find the length of the missing sides on pages 2.3, 2.4, and 2.5. Verify your answer by using the **Length** tool to measure the side.

1.

2.

3.



Problem 3 – Extra Practice

On page 3.1, use the trigonometric relationships to find the length of side AC for each of the triangles.

1.

2.

3.
