

Homework 3.3

Topic: Trigonometric Ratios and Connections between them.

Based on the given trigonometric ratio, sketch a triangle and find a possible value for the missing side as well as the other missing trig ratios. Angles A and B are the two non-right angles in a right triangle.

1. Given a right triangle with the following trigonometric ratio: $\tan(A) = \frac{3}{4}$

Find all of the trigonometric ratios for this triangle.

Sketch of Triangle

$$\sin(A) =$$

$$\sin(B) =$$

$$\cos(A) =$$

$$\cos(B) =$$

$$\tan(A) = \frac{3}{4}$$

$$\tan(B) =$$

2. Given a right triangle with the following trigonometric ratio: $\sin(B) = \frac{8}{17}$

Find all of the trigonometric ratios for this triangle.

Sketch of Triangle

$$\sin(A) =$$

$$\sin(B) = \frac{8}{17}$$

$$\cos(A) =$$

$$\cos(B) =$$

$$\tan(A) =$$

$$\tan(B) =$$

3. Given a right triangle with the following trigonometric ratio: $\sin(B) = \frac{1}{\sqrt{2}}$

Find all of the trigonometric ratios for this triangle.

Sketch of Triangle

$$\sin(A) =$$

$$\sin(B) = \frac{1}{\sqrt{2}}$$

$$\cos(A) =$$

$$\cos(B) =$$

$$\tan(A) =$$

$$\tan(B) =$$

4. Given a right triangle with the following trigonometric ratio: $\cos(A) = \frac{12}{13}$

Find all of the trigonometric ratios for this triangle.

Sketch of Triangle

$$\sin(A) =$$

$$\sin(B) =$$

$$\cos(A) = \frac{12}{13}$$

$$\cos(B) =$$

$$\tan(A) =$$

$$\tan(B) =$$