# Right Triangle Trigonometry

**Objectives**

- Use the Right Triangle Trigonometry Functions to evaluate angles of right triangles.

**Notes**

**The Right Triangle Trigonometric Functions**

$$\sin\theta = \frac{\text{opp}}{\text{hyp}} \qquad \cos\theta = \frac{\text{adj}}{\text{hyp}} \qquad \tan\theta = \frac{\text{opp}}{\text{adj}}$$

$$\csc\theta = \frac{\text{hyp}}{\text{opp}} \qquad \sec\theta = \frac{\text{hyp}}{\text{adj}} \qquad \cot\theta = \frac{\text{adj}}{\text{opp}}$$

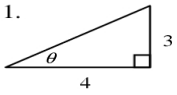
Many applications of trigonometry involve a process called *solving right triangles*. In this type of application, you are usually given one side of a right triangle and one of the acute angles and asked to find one of the other sides, *or* you are given two sides and asked to find one of the acute angles.

Many times it is very helpful to draw a diagram to help organize your thoughts and help visualize the problem.

**Examples**

Find the exact values of the six trig functions of the angle $\theta$.

1.

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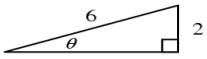


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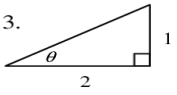


4.