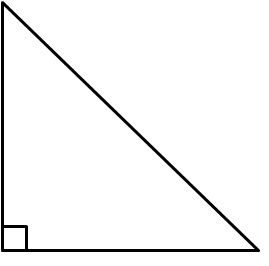
**8.1 Right Triangle Trig (G.SRT.6)**

**Pythagorean Theorem:**

**Trigonometry –**

|  |  |
| --- | --- |
| http://perezhortinelafamily.us/wp-content/uploads/2011/02/Right-Triangle.jpg | **Trig Ratios: SOHCAHTOA**  **sine**  **cosecant**  **cosine secant**  **tangent cotangent** |

**Identify the six trig ratios for the triangles in the examples below:**

|  |  |
| --- | --- |
| **Example 1:** | **Example 2:** |

**Use a calculator to find each value.**

|  |  |  |
| --- | --- | --- |
| Ex. 3) | Ex. 4) | Ex. 5) |

**8.2 Solving a Triangle**

**We can use the inverse trig functions to find the measure of an angle.**

|  |  |  |
| --- | --- | --- |
| **a.** | **b.** | **c.** |

**Write an equation using the different trig functions to solve for x.**

**Find the measure of each side indicated. Round to the nearest tenth.**

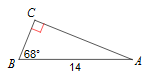
|  |  |
| --- | --- |
| **Example 1:** | **Example 2:** |

**Find the measure of each angle indicated. Round to the nearest tenth.**

|  |  |
| --- | --- |
| **Example 3:** | **Example 4:** |

**Solve each triangle. Round answers to the nearest tenth.**

**Example 5:**

****

**8.3 Angles of Elevation and Depression (G.SRT.8, pg 286)**

Vocab:

|  |  |
| --- | --- |
| **Angle of Elevation:**  **Angle of Depression:** |  |

**\*Hint: Drawing a picture will help to set up the triangles.**

Example 1

You are standing 196 feet from the base of an office building in downtown Salt Lake City. The angle of elevation to the top of the building is 65 Find the height of the building.

Example 2

John is standing on the roof of a building that is 300 feet tall and sees Sarah standing on the ground. If the angle of depression is 60 how far away is Sarah from John?

Example 3

A kite has 25 feet of string. The wind is blowing the kite to the west so that the angle of elevation is 40. How far has the kite traveled horizontally?

Example 4

A sledding run is 400 yards long with a vertical drop of 40.2 yards. Find the angle of depression of the run.