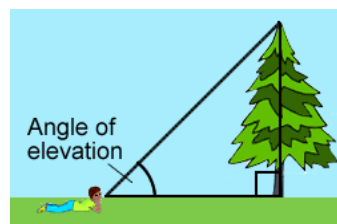# Vocabulary: Sine, Cosine, and Tangent Ratios

📖 **Vocabulary**

- <u>Angle of elevation</u> – the angle between the line of sight to an object and the horizon.
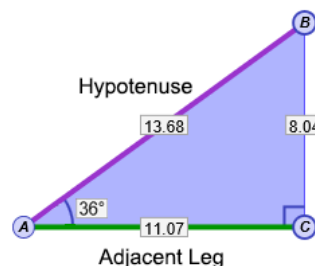

Angle of elevation

- <u>Cosine</u> – in a right triangle, the length of the leg adjacent to angle θ divided by the hypotenuse: $\cos \theta = \dfrac{\text{adjacent}}{\text{hypotenuse}}$.

    o The triangle to the right shows that:

    $$\cos 36° = \frac{11.07}{13.68}, \text{ or} \approx 0.809.$$

- <u>Hypotenuse</u> – the side of a right triangle opposite the right angle.

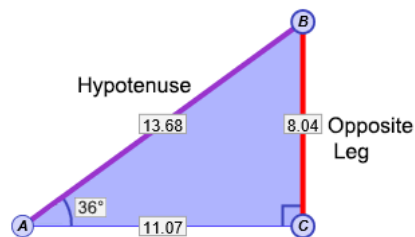   o The hypotenuse is the longest side of a right triangle.

- <u>Legs (of a right triangle)</u> – the two sides of a right triangle that form the right angle.

- <u>Right triangle</u> – a triangle that contains one right angle.

- <u>Sine</u> – in a right triangle, the length of the leg opposite to angle θ divided by the hypotenuse: $\sin \theta = \dfrac{\text{opposite}}{\text{hypotenuse}}$.

    o The triangle to the right shows that:

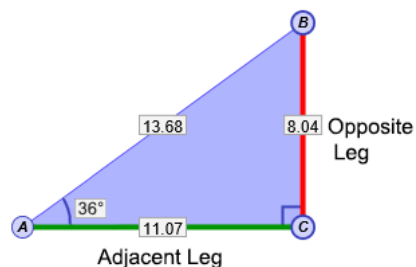 $$\sin 36° = \frac{8.04}{13.68}, \text{ or} \approx 0.588.$$

- <u>Tangent</u> – in a right triangle, the length of the leg opposite to angle θ divided by the length of the leg adjacent to angle θ: $\tan \theta = \dfrac{\text{opposite}}{\text{adjacent}}$.

    o The triangle to the right shows that:

    $$\tan 36° = \frac{8.04}{11.07}, \text{ or} \approx 0.726.$$

- <u>Trigonometric ratio</u> – a ratio that relates the side lengths of a right triangle to its angles.

    o The most commonly used trigonometric ratios are sine, cosine, and tangent. Others include *secant*, *cosecant*, and *cotangent*.