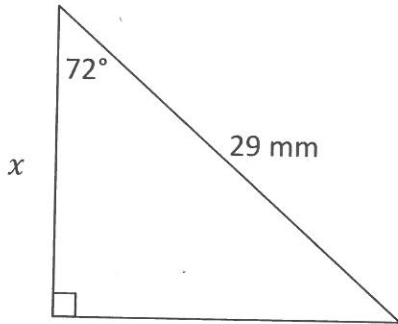


The following examples show how to use the trigonometric ratios to determine a side length in a right triangle. (make sure your calculator is in degrees mode)

Example 1



Given: $\theta = 72^\circ$ Find: adj.

$$\text{hyp.} = 29$$

$$\text{adj} = x$$

use trig. ratio.

$$\cos \theta = \frac{\text{adj}}{\text{hyp.}}$$

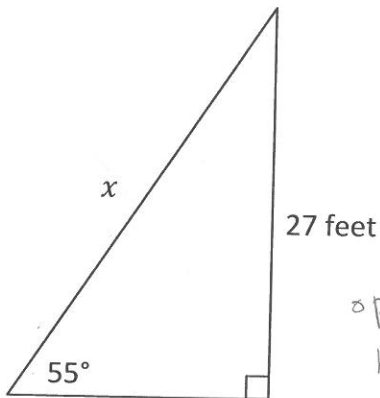
$$\cos 72 = \frac{x}{29}$$

$$29 \times \cos 72 = \frac{x}{29} \times 29$$

$$29 \cos 72 = x$$

$$x = 8.96 \text{ mm}$$

Example 2



Given:

$$\theta = 55^\circ$$

$$\text{opp. side} = 27$$

$$\text{hyp} = x$$

Find the hypotenuse

$$\text{use } \sin \theta = \frac{\text{opp.}}{\text{hyp.}}$$

$$\sin 55 = \frac{27}{x}$$

$$x = \frac{27}{\sin 55}$$

$$x = 32.96 \text{ feet}$$