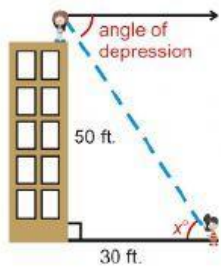


Solving for an angle using trigonometric ratios

1. Find the angle of elevation



O A H

Given:

Missing:

S OH C AH T OA

sine cosine tangent

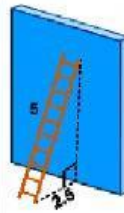
We use ratio.

sin cos tan sin cos tan

$$\text{sin}(x) = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{50}{30}$$

$$x = \sin^{-1}\left(\frac{50}{30}\right) = \sin^{-1}\left(\frac{30}{50}\right)$$

2. Find the angle of depression



O A H

Given:

Missing:

S OH C AH T OA

sine cosine tangent

We use ratio.

sin cos tan sin cos tan

$$\text{sin}(x) = \frac{\text{opposite}}{\text{hypotenuse}} = \frac{2.5}{5}$$

$$x = \sin^{-1}\left(\frac{5}{2.5}\right) = \sin^{-1}\left(\frac{2.5}{5}\right)$$