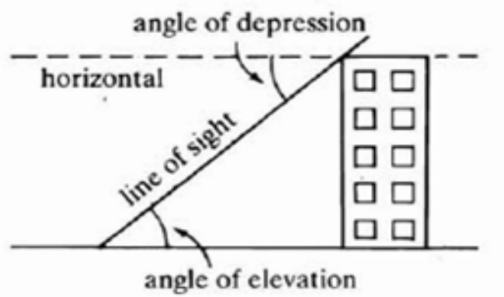


8.7 Applications of Right Triangle Trigonometry

std. 19.0

Feb 8

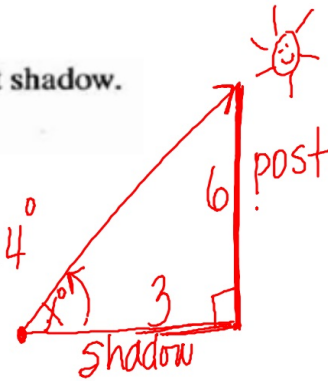


1

At a certain time, a post 6 ft tall casts a 3 ft shadow. What is the angle of elevation of the sun?

$$\tan x^\circ = \frac{6}{3}$$

$$x = \tan^{-1} 2 \approx 63.4^\circ$$



2

A guy wire is attached to the top of a tower and to a point on the ground that is 35 m from the base of the tower. If the wire makes a 65° angle with the ground, how long is the wire?

$$\cos 65^\circ = \frac{35}{W}$$

$$W = \frac{35}{\cos(65^\circ)}$$

$$W \approx 83 \text{ m}$$

