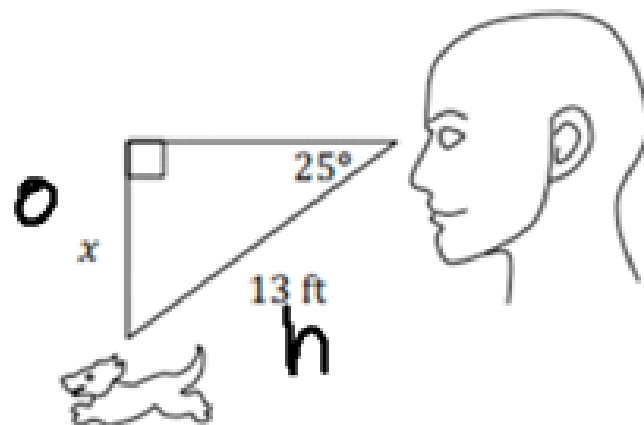


2. Consider the diagram below that represents someone's eye level as he looks at his dog. Find the value of x , and round to the nearest hundredth of a foot.

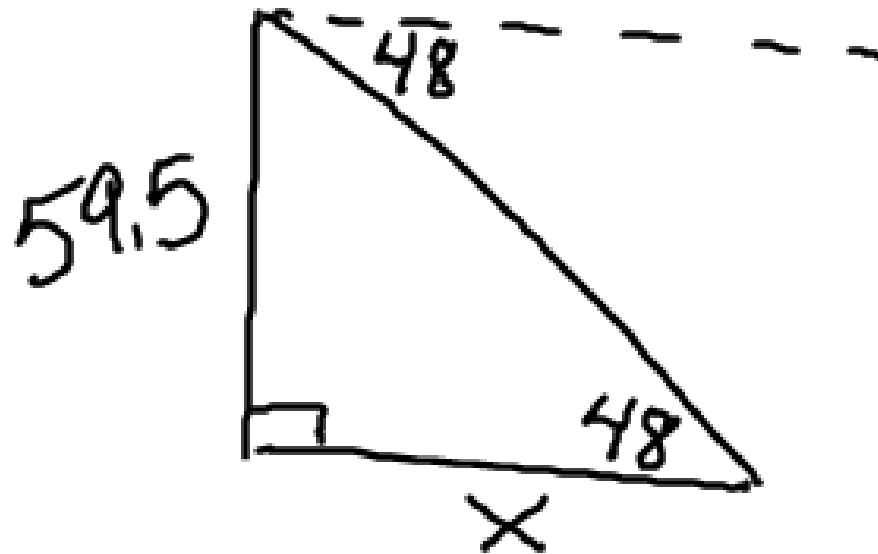


$$\sin 25 = \frac{x}{13}$$

$$13 \sin 25 = x$$

$$13 * 25 \sin = 5.49$$

Suppose that you are standing on a hill that is 59.5 ft tall looking down on a lake at an angle of depression of 48° . How far are you from the lake? Round your answer to the nearest foot.



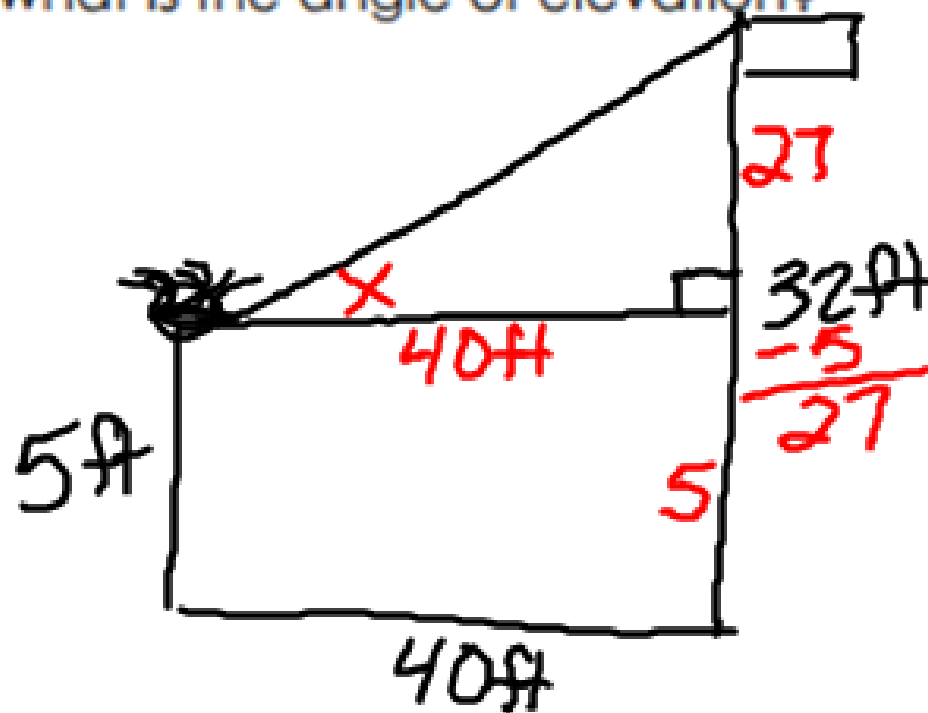
$$\tan 48 = \frac{59.5}{x}$$

$$x = \frac{59.5}{\tan 48}$$

$$59.5 \div 48 \tan =$$

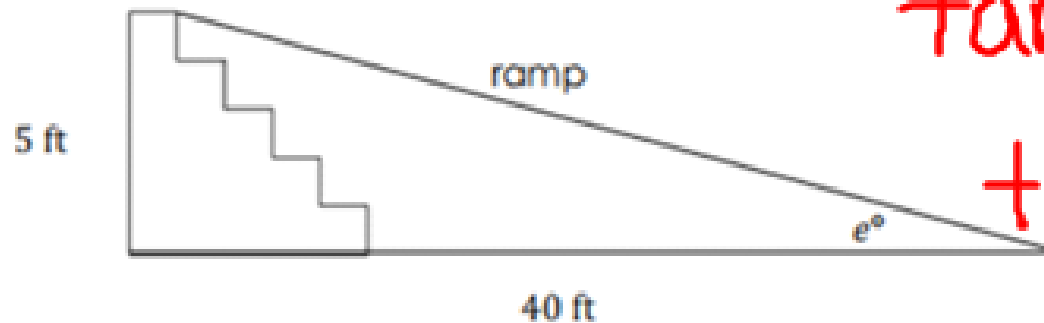
54 ft

If Lionel has an eye level of 5 feet above the ground and he is standing 40 feet from a flagpole that is 32 feet tall, then what is the angle of elevation?



$$\tan x = \frac{27}{40}$$
$$\tan^{-1} x = .675$$
$$\angle x = 34^\circ$$

Yandel will place a ramp over a set of stairs at the backyard entrance so that one end is 5 feet off the ground. The other end is at a point that is a horizontal distance of 40 feet away, as shown in the diagram. The angle of elevation of the ramp is represented by e° .

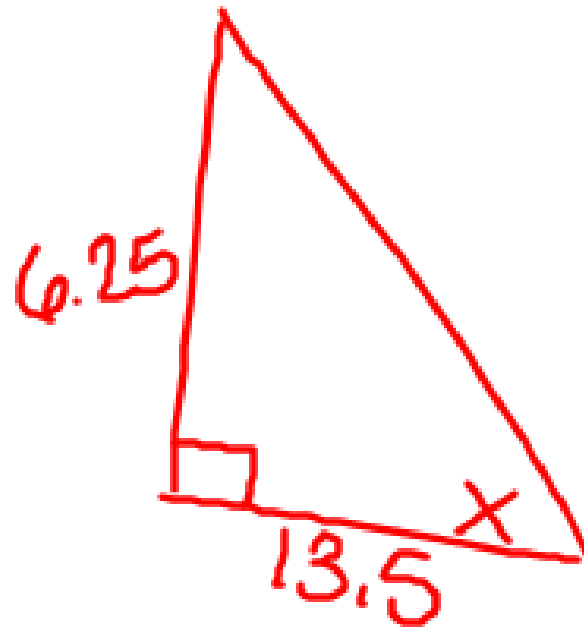


$$\tan e = \frac{5}{40}$$
$$\tan^{-1} e = .125$$
$$\angle e = 7.1^\circ$$

What is the angle of elevation to the nearest tenth of a degree?

A man is 6 feet 3 inches tall. The tip of his shadow touches a fire hydrant that is 13 feet 6 inches away. What is the angle of elevation from the base of the fire hydrant to the top of the man's head? Round to the nearest tenth of a degree.

- A 24.8°
- B 34.5°
- C 42.6°
- D 65.2°



$$\tan x = \frac{6.25}{13.5}$$

$$\angle x = 24.8$$