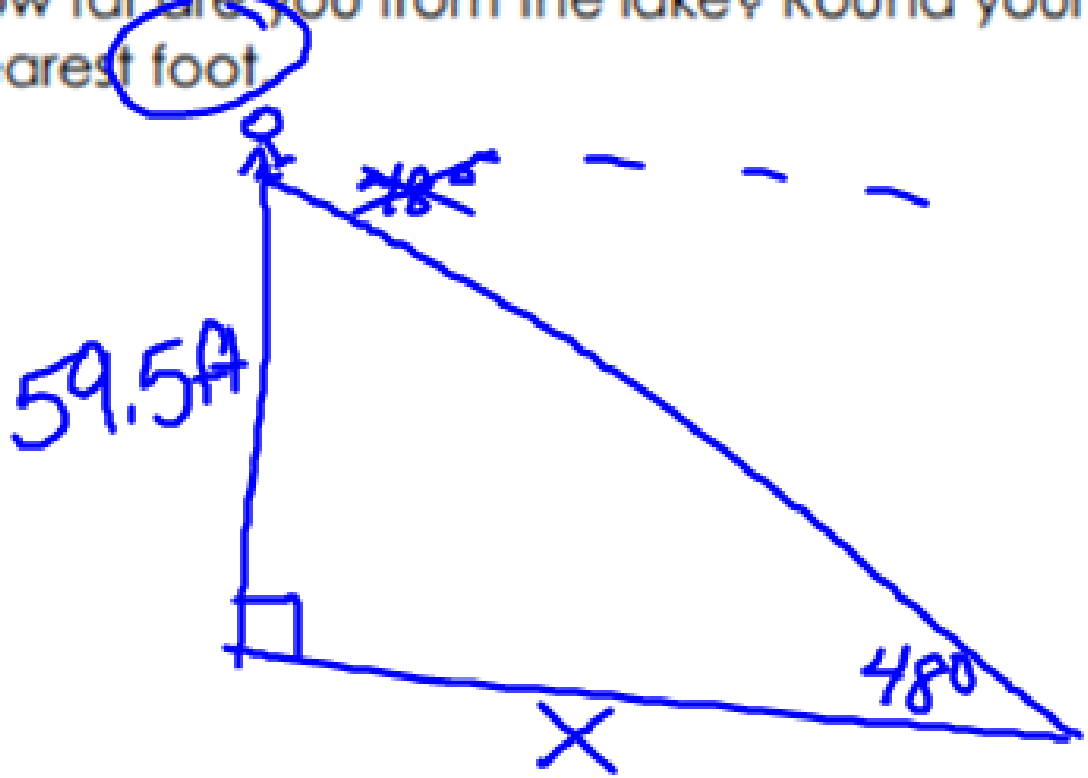
Suppose that you are standing on a hill that is 59.5 ft tall looking down on a lake at an angle of depression of 48°. How far are you from the lake? Round your answer to the nearest foot.



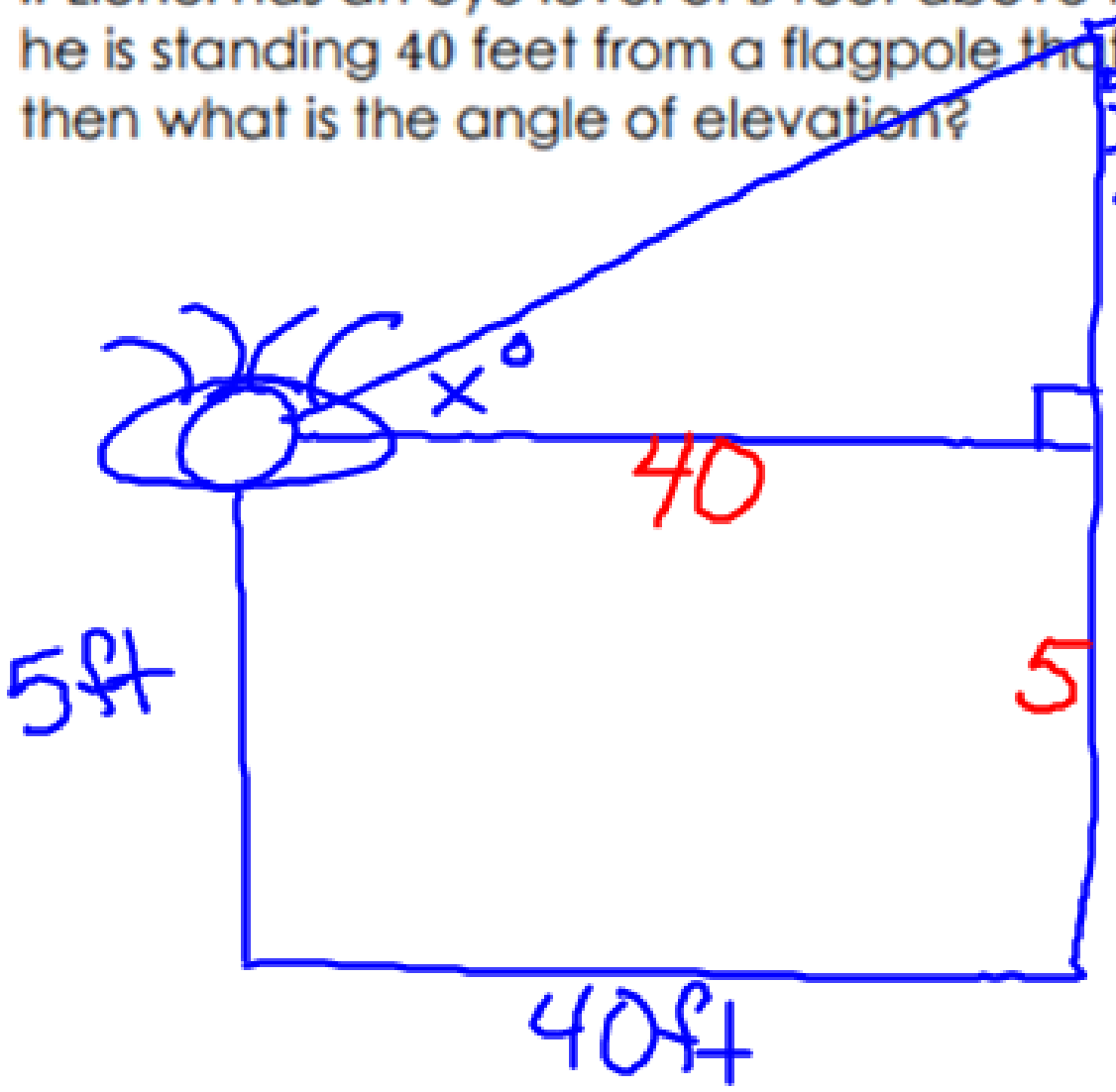
$$\tan 48 = \frac{59.5}{x}$$

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

59.5 ÷ 48 tan =

54ft

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?



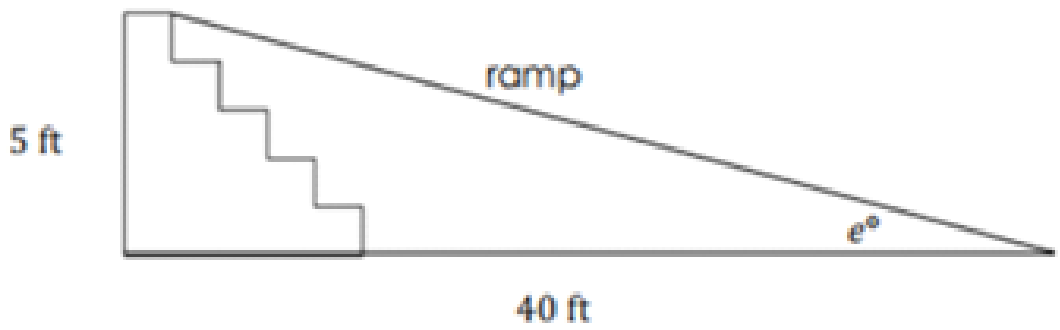
$32 - 5 = 27$

$\tan x = \frac{27}{40}$

$\tan^{-1} x = 0.675$

$\angle x = 34^\circ$

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 $e°$.



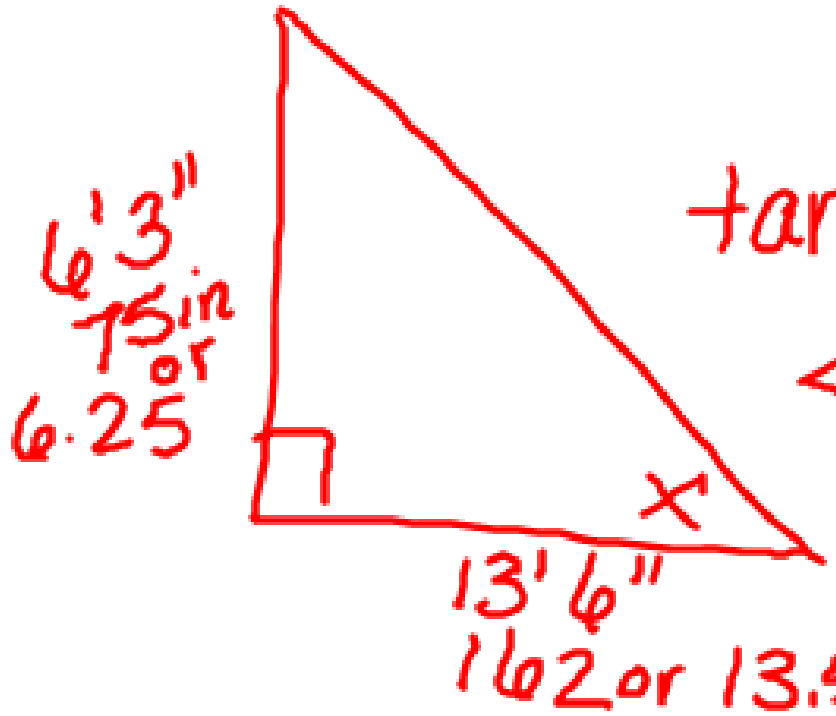
What is the angle of elevation to the nearest tenth of a degree?

$\tan e = \frac{5}{40}$

$\angle e = 7.1°$

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°



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

$\angle x = 24.8$