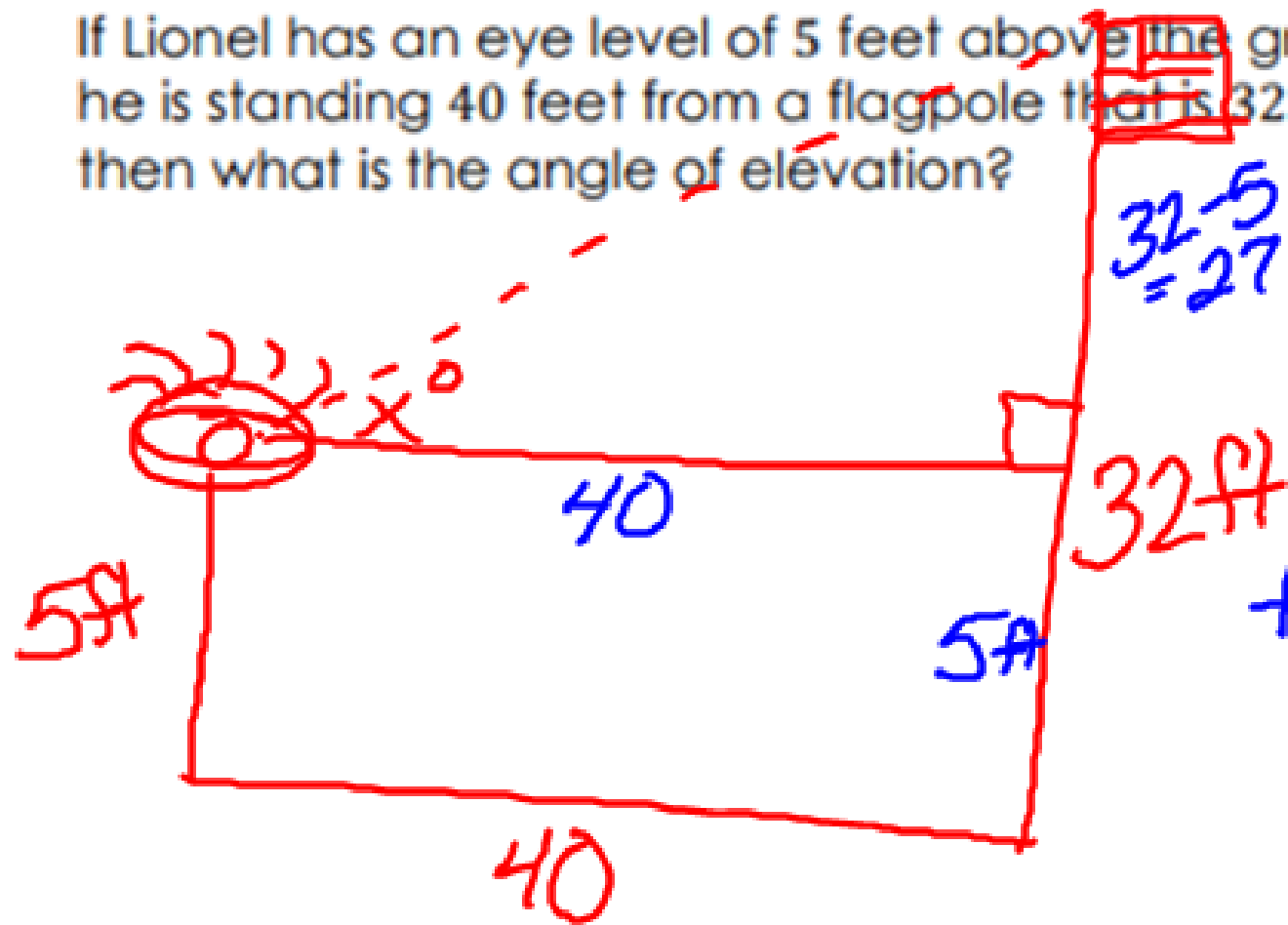


If Lionel has an eye level of 5 feet above the ground and he is standing 40 feet from a flagpole that is 32 feet tall, then what is the angle of elevation?



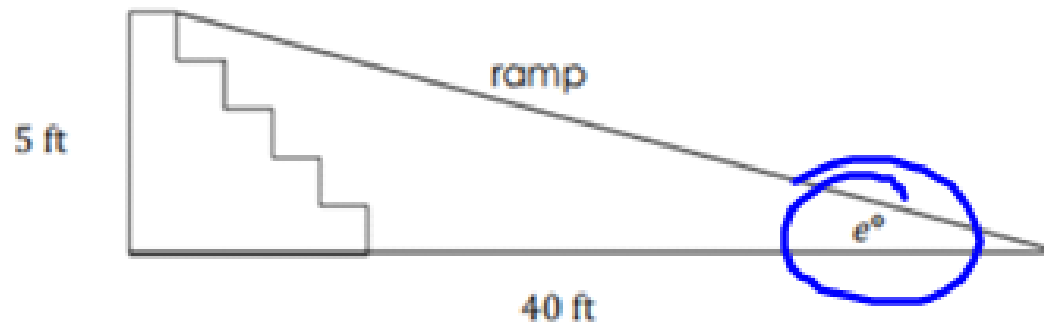
$$32 - 5 = 27$$

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

$$\tan^{-1} x = .675$$

$$\angle x = 34^\circ$$

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  $e^\circ$ .



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

$$\begin{aligned}\tan e &= \frac{5}{40} \\ \tan e^{-1} &= .125 \\ \angle e &= 7.1\end{aligned}$$

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)  $24.8^\circ$
- (B)  $34.5^\circ$
- (C)  $42.6^\circ$
- (D)  $65.2^\circ$

