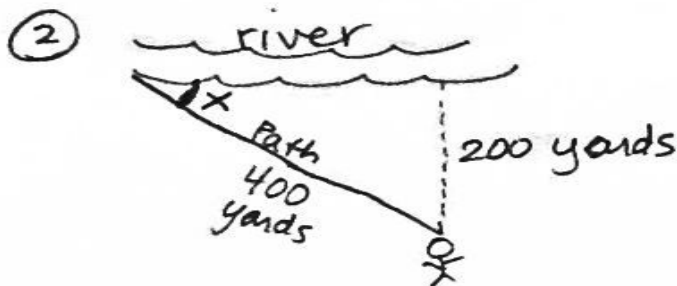


Use 30-60-90  
Ladder is 30ft long

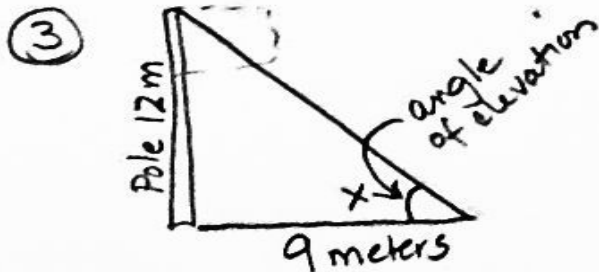


$$\sin x = \frac{200}{400}$$

$$x = \sin^{-1}\left(\frac{200}{400}\right)$$

$$x = 30^\circ$$

The angle between the path and edge is  $30^\circ$ .



$$\tan x = \frac{12}{9}$$

$$x = \tan^{-1}\left(\frac{12}{9}\right)$$

$$x \approx 53^\circ$$