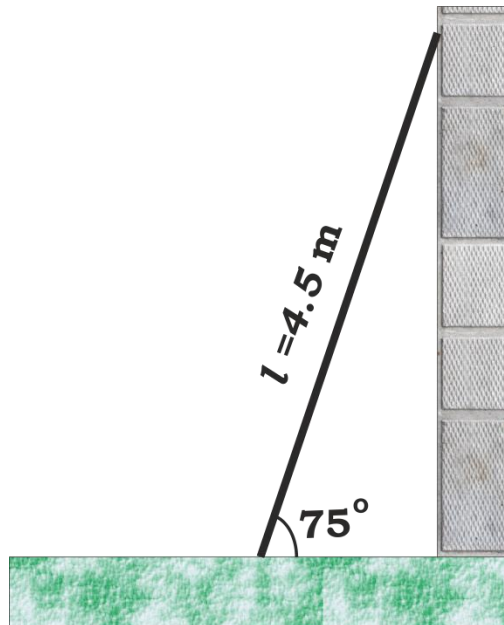


### Answer on Question #73377 - Physics / Other

You have a ladder that has a length of  $l = 4.5$  m leaning against a building at an angle of  $\alpha = 75^\circ$  to the horizontal. You climb from the bottom of the ladder to the top. How far do you move?  
Horizontally?  
Vertically?

**Solution:**



Horizontally

$$x = l \cos \alpha = 4.5 \cos 75^\circ = 1.16 \text{ m}$$

Vertically

$$y = l \sin \alpha = 4.5 \sin 75^\circ = 4.35 \text{ m}$$

**Answers:**

Horizontally 1.16 m

Vertically 4.35 m

Answer provided by <https://www.AssignmentExpert.com>