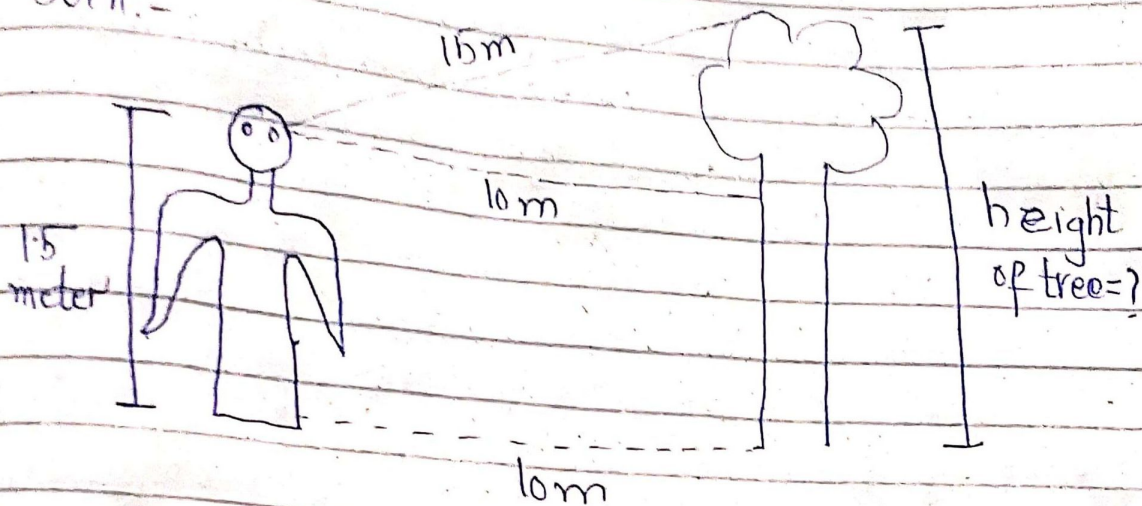


Ali is standing 10 meters away from a tree. The distance of his eyes from his feet is 1.5 meter. Given that the distance from his eyes to the top of the tree is 15 meters. Find the height of the tree.

Soln:-



By using pythagorean theorem

$$(\text{Hyp})^2 = (\text{base})^2 + (\text{Perp})^2$$

$$(\text{Perp})^2 = (\text{Hyp})^2 - (\text{base})^2$$

$$= (15)^2 - (10)^2$$

$$= 225 - 100$$

$$(\text{Perp})^2 = 125 \text{ m}$$

$$\text{Perp} = \sqrt{125} \text{ m}$$

$$\text{Perpendicular} = 5\sqrt{5} \text{ m}$$

$$\text{Height of tree} = 5\sqrt{5}\text{m} + 1.5\text{m}$$

$$\text{So, the height of tree} = (5\sqrt{5} + 1.5)\text{m}$$