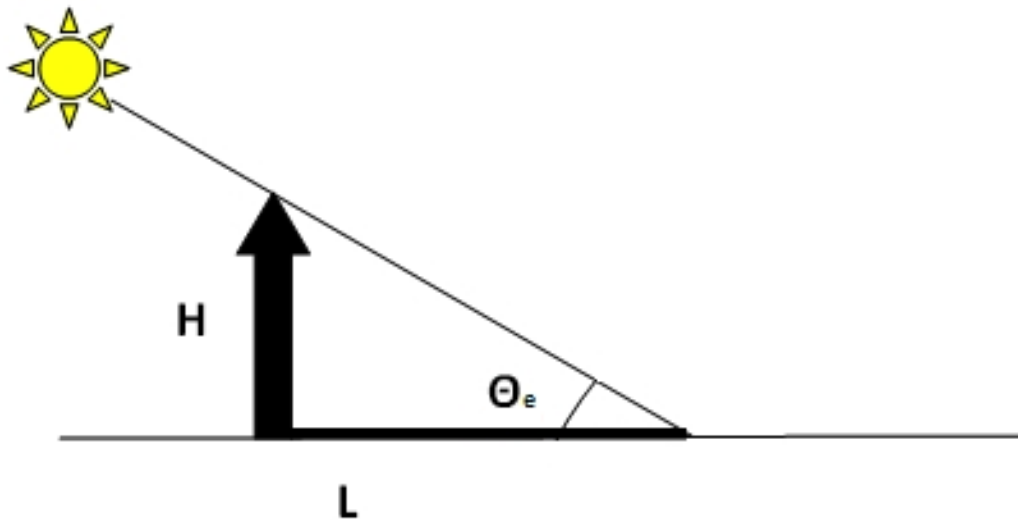


Answer on Question #43768 – Math - Algebra

find the angle of elevation of the sun when a 6m high pole makes shadow of length 203m on the horizontal plane.

Solution:



$H = 6\text{m}$ – height of the pole;

$L = 203\text{m}$ – length of the shadow;

θ_e – angle of elevation of the sun;

From the right triangle:

$$\tan \theta_e = \frac{H}{L}$$

Angle of elevation of the sun is given by

$$\theta_e = \arctan\left(\frac{H}{L}\right) = \arctan\left(\frac{6\text{ m}}{203\text{ m}}\right) = 1.7^\circ$$

Answer: Angle of elevation of the sun is equal to 1.7° .