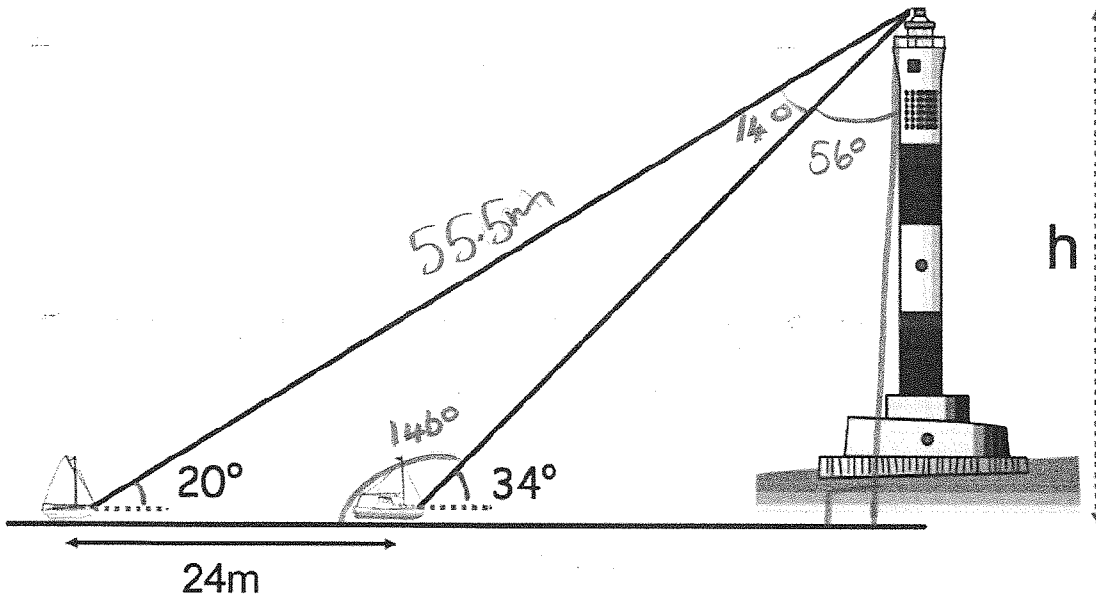


16.

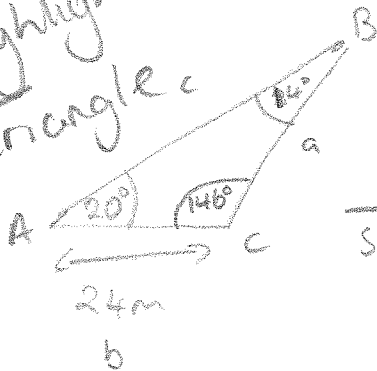


Two small boats are 24m apart.

The angle of elevation of the boats to the top of a lighthouse are 20° and 34° respectively.

Calculate the height of the lighthouse.

Highlighted Triangle



Sine Rule $\frac{b}{\sin B} = \frac{c}{\sin C}$

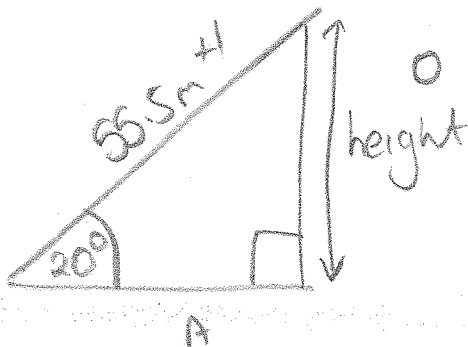
$$\frac{24}{\sin 146^\circ} = \frac{c}{\sin 146^\circ}$$

$$\frac{24}{\sin 146^\circ} \times \sin 146^\circ = c$$

$$c = 55.5m$$

$$18.98m$$

(6)



$H = 55.5m$
 angle = 20°
 $O = ?$



$$\sin 20^\circ \times 55.5m = 18.98m$$