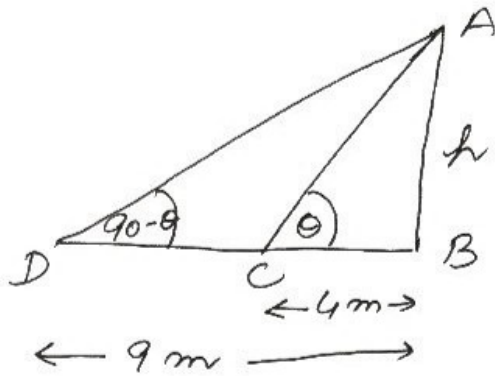


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let  $AB$  represents tower,  
 $C, D$  are points of observ.

In  $\Delta CBA$

$$\tan \theta = \frac{AB}{BC}$$

$$\tan \theta = \frac{h}{4} \quad \dots \textcircled{1}$$

In  $\Delta DBA$

$$\tan (90^\circ - \theta) = \frac{AB}{DB}$$

$$\Rightarrow \cot \theta = \frac{h}{9} \quad \dots \textcircled{11}$$

$$\textcircled{1} \times \textcircled{11}$$

$$\tan \theta \cot \theta = \frac{h}{4} \times \frac{h}{9}$$

$$\Rightarrow \cancel{\tan \theta} \times \frac{1}{\cancel{\tan \theta}} = \frac{h^2}{36}$$

$$\Rightarrow h^2 = 36$$

$$\Rightarrow h = 6$$

$\therefore$  height of tower  
 $= 6\text{ m}$