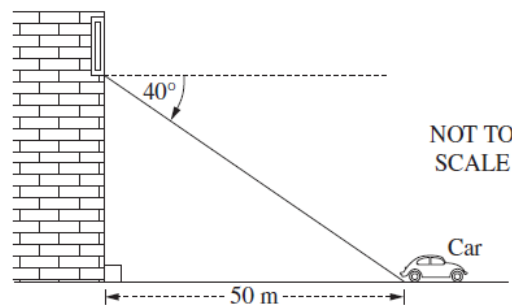




- SQ ME 9** The angle of depression from a window to a car on the ground is  $40^\circ$ . The car is 50 metres from the base of the building. How high above the ground is the window, correct to the nearest metre?
- A. 32 m  
B. 38 m  
C. 42 m  
D. 48 m



1

C

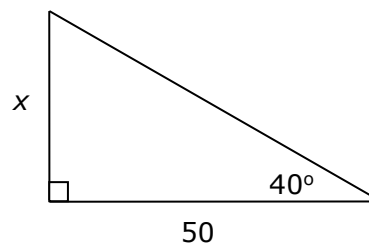
Using alternate angles and parallel lines, angle is  $40^\circ$ .

$$\frac{x}{50} = \tan 40^\circ$$

$$x = 50 \tan 40^\circ$$

$$= 41.95498156\dots$$

$$= 42 \text{ (nearest whole)} \quad \therefore \text{the window is 42 metres from the ground.}$$



\* These solutions have been provided by [projectmaths](http://projectmaths.com.au) and are not supplied or endorsed by NESA.