

MATHEMATICS ANSWERS

Level One

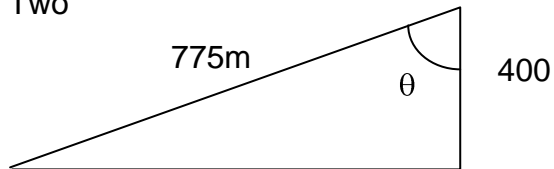
“Road Works”

Task one

$$\text{a) } \cos 60^\circ = \frac{w}{40.4} \Rightarrow w = 40.4 \cos 60^\circ = 20.20\text{m (1dp)}$$

$$\text{b) } \cos 45^\circ = \frac{w}{34.5} \Rightarrow w = 34.5 \cos 45^\circ = 24.4\text{m (1dp)}$$

Task Two



$$\cos \theta = \frac{400}{775}$$

$$\Rightarrow \theta = \cos^{-1}\left(\frac{400}{775}\right)$$

$$\Rightarrow \theta = 58.93^\circ$$

$$\Rightarrow \text{Bearing} = 180^\circ + 58.93$$

$$\Rightarrow = 238^\circ 55' 37'' \text{ (or } 238.93^\circ)$$