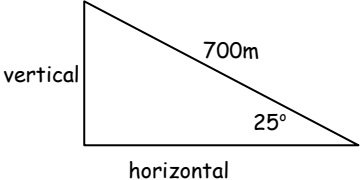


Answers -

1)



vertical

700m

25°

horizontal

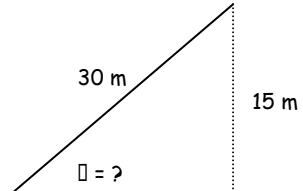
$\frac{\text{Vert}}{700 \text{ m}} = \sin 25$

Vert = $700 \sin 25 = 296 \text{ m}$

$\frac{\text{Horiz}}{700 \text{ m}} = \cos 25$

Horiz = $700 \cos 25 = 634 \text{ m}$

2)



30 m

15 m

$\theta = ?$

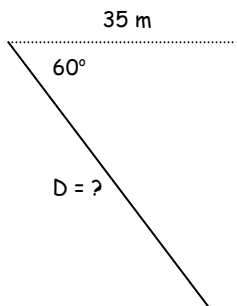
$\frac{\text{Opp}}{30 \text{ m}} = \sin \theta$

Adj

$\frac{15 \text{ m}}{30 \text{ m}} = \sin \theta$

$\sin^{-1}(15 / 30) = \theta = 30^\circ$

3)



35 m

60°

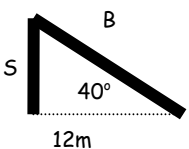
D = ?

$\frac{35 \text{ m}}{D} = \cos 60$

$\frac{35 \text{ m}}{D \cos 60} = 1$

$\frac{35 \text{ m}}{\cos 60} = D = 70 \text{ m}$

4)



S

B

40°

12m

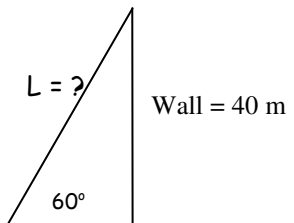
B = broken part, S = stump

$\frac{12 \text{ m}}{B} = \cos 40$ $\frac{S}{12 \text{ m}} = \tan 40$

$\frac{12 \text{ m}}{\cos 40} = B = 15.7 \text{ m}$ $S = 12 \tan 40 = 10.1 \text{ m}$

Total height = B + S = $15.7 + 10.1 = 25.8 \text{ m}$

5)



L = ?

Wall = 40 m

60°

$\frac{40 \text{ m}}{L} = \sin 65$

$\frac{40 \text{ m}}{\sin 65} = L = 44.7 \text{ m}$