

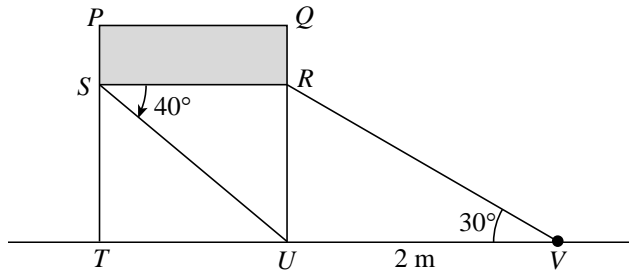


CHAPTER 10: ANGLES OF ELEVATION AND DEPRESSION



Paper 1

Solution to Question 20



$$\begin{aligned}\text{In } \triangle URV, \frac{RU}{2} &= \tan 30^\circ \\ RU &= 2 \tan 30^\circ \\ &= 1.1547\end{aligned}$$

$$\angle SUR = 90^\circ - 40^\circ = 50^\circ$$

$$\text{But } SR = PQ$$

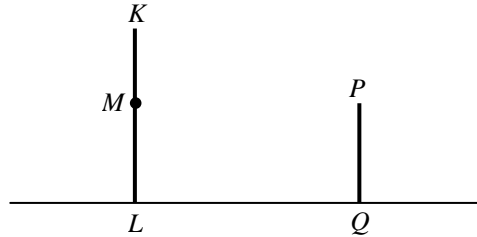
$$\begin{aligned}\text{Therefore, } \frac{PQ}{1.1547} &= \tan 50^\circ \\ PQ &= 1.1547 \tan 50^\circ \\ &= 1.38\end{aligned}$$

Answer: D

 **Paper 1**

1. The diagram shows two vertical poles, KL and PQ , on a horizontal plane.

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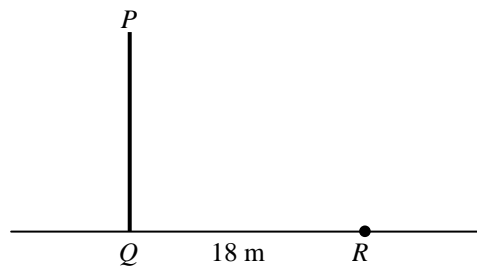


Given $ML = PQ$, name the angle of depression of P from K .

- | | | | |
|----------|--------------|----------|--------------|
| A | $\angle KPQ$ | C | $\angle KPL$ |
| B | $\angle KPM$ | D | $\angle KQL$ |

2. In the diagram, PQ is a vertical flag pole on a horizontal plane. The angle of elevation of P from R is 40° .

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The height, in m, of the flag post is

- | | |
|----------|-------|
| A | 11.57 |
| B | 13.79 |
| C | 15.10 |
| D | 21.45 |
3. In the diagram, PQ and XY are two vertical poles on a horizontal plane. The difference in height between the two poles is 2 m and the horizontal distance between the two poles is 8 m.



The angle of depression of P from X is

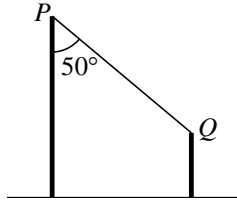
- | | | | |
|----------|--------------|----------|--------------|
| A | 14.0° | C | 75.5° |
| B | 14.5° | D | 76.0° |

4.

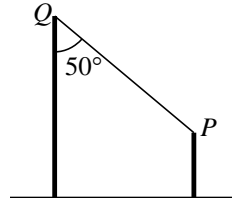
P and Q are the vertices of two vertical poles.
The angle of depression of P from Q is 50° .

Which of the following represents the information above.

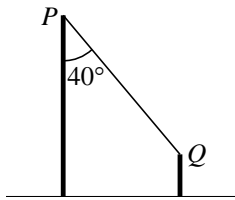
A



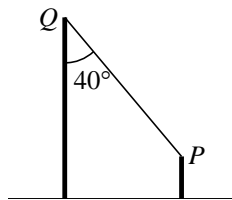
C



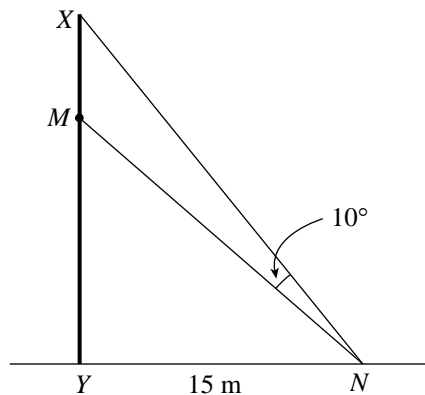
B



D



5. In the diagram, XY is a vertical pole on a horizontal plane. XN and MN are two straight ropes tied to the pole XY . The angle of elevation of M from N is 41° .



Find the height of the pole, in m.

- A 9.44
- B 11.66
- C 12.15
- D 18.52