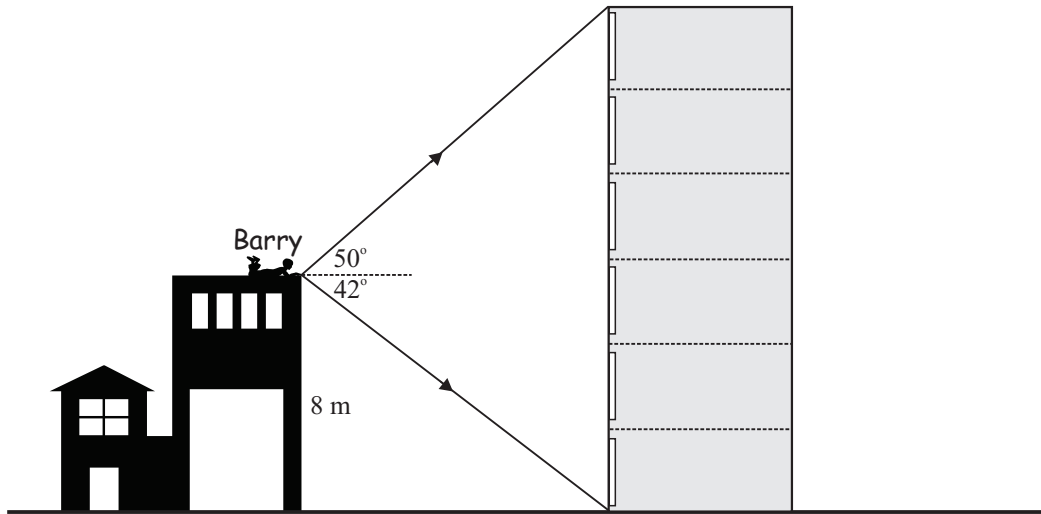


SAMPLE PAPER 5: PAPER 2

QUESTION 8 (35 MARKS)



Question 8 (a)

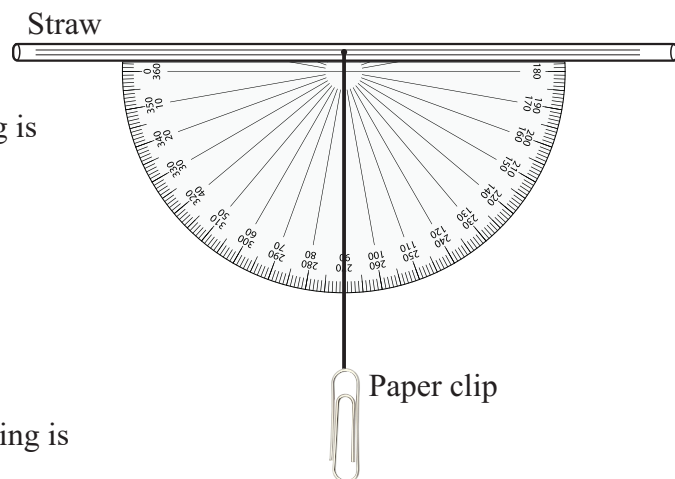
Hold the clinometer so that the string is vertical.

ANGLE OF ELEVATION:

- Tilt the clinometer looking through the drinking straw so that the highest point on the top of the building is visible.
- Read the angle of elevation of this highest point to the nearest degree.

ANGLE OF DEPRESSION:

- Tilt the clinometer looking through the drinking straw so that the lowest point at the bottom of the building is visible.
- Read the angle of depression of this lowest point to the nearest degree.



Question 8 (b) (i)

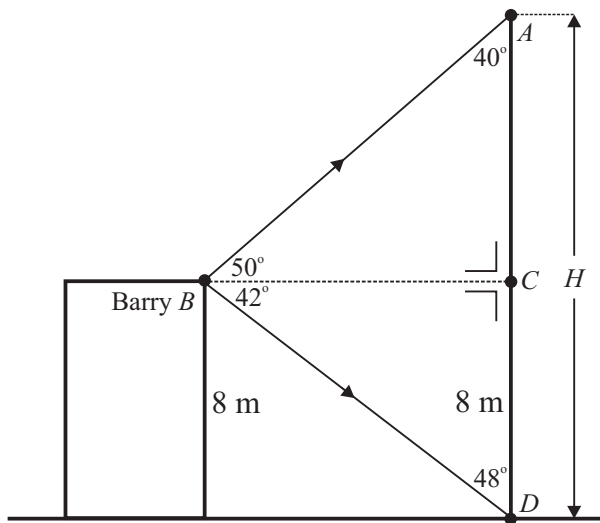
ANGLE OF ELEVATION: The angle the line of sight to an object makes with the horizontal when the object is above the level of the observer.

ANGLE OF DEPRESSION: The angle the line of sight to an object makes with the horizontal when the object is below the level of the observer.

Question 8 (b) (ii)

An angle of elevation of 0° means the height of the building opposite would be the same as the height of his building, i.e. 8 m.

Question 8 (c) (i)



Question 8 (c) (ii)

$$\tan A = \frac{\text{Opposite}}{\text{Adjacent}}$$

Consider triangle BCD :

$$\tan 42^\circ = \frac{8}{|BC|} \Rightarrow |BC| = \frac{8}{\tan 42^\circ} = 8.9\text{ m}$$

Question 8 (c) (iii)

Consider triangle BCA :

$$\tan 50^\circ = \frac{|AC|}{8.9} \Rightarrow |AC| = 8.9 \tan 50^\circ = 10.6\text{ m}$$

$$\therefore H = |DC| + |AC| = 8 + 10.6 = 18.6\text{ m}$$