



Lines and angles Ex 14.2 Q10

Answer :

In the given figure, line $l \parallel m$.

Thus, we have:

$$\angle a = 110^\circ \quad (\text{Vertically opposite angles})$$

$$\angle b = \angle a = 110^\circ \quad (\text{Corresponding angles})$$

$$\angle d = 85^\circ \quad (\text{Vertically opposite angles})$$

$$\angle c = \angle d = 85^\circ \quad (\text{Corresponding angles})$$

Lines and angles Ex 14.2 Q11

Answer :

In the given figure, $AB \parallel CD$ and t is a transversal line.

Now, let:

$$\angle 1 = 3x$$

$$\angle 2 = 2x$$

Thus, we have:

$$\angle 1 + \angle 2 = 180^\circ \quad (\text{Linear pair})$$

$$\therefore 3x + 2x = 180^\circ$$

$$\Rightarrow 5x = 180^\circ$$

$$\Rightarrow x = \frac{180^\circ}{5} = 36^\circ$$

Thus,

$$\angle 1 = 3 \times 36^\circ = 108^\circ$$

$$\angle 2 = 2 \times 36^\circ = 72^\circ$$

Now,

$$\angle 1 = \angle 5 = 108^\circ \quad (\text{Corresponding angles})$$

$$\angle 1 = \angle 3 = 108^\circ \quad (\text{Vertically opposite angles})$$

$$\angle 5 = \angle 7 = 108^\circ \quad (\text{Vertically opposite angles})$$

$$\angle 2 = \angle 6 = 72^\circ \quad (\text{Corresponding angles})$$

$$\angle 4 = \angle 2 = 72^\circ \quad (\text{Vertically opposite angles})$$

$$\angle 8 = \angle 6 = 72^\circ \quad (\text{Vertically opposite angles})$$

***** END *****