



Lines and angles Ex 14.2 Q6

Answer :

In the given figure, $l \parallel m$, n is a transversal line and $\angle 1 = 75^\circ$.

Thus, we have:

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

$$\Rightarrow \angle 2 = 180^\circ - \angle 1 = 180^\circ - 75^\circ = 105^\circ$$

$$\therefore \angle 1 = \angle 5 = 75^\circ \quad (\text{Corresponding angles})$$

$$\angle 1 = \angle 3 = 75^\circ \quad (\text{Vertically opposite angles})$$

$$\angle 5 = \angle 7 = 75^\circ \quad (\text{Vertically opposite angles})$$

Now,

$$\angle 2 = \angle 6 = 105^\circ \quad (\text{Corresponding angles})$$

$$\angle 6 = \angle 8 = 105^\circ \quad (\text{Vertically opposite angles})$$

$$\angle 2 = \angle 4 = 105^\circ \quad (\text{Vertically opposite angles})$$

Lines and angles Ex 14.2 Q7

Answer :

In the given figure, $AB \parallel CD$, PQ is a transversal line and $\angle QMD = 100^\circ$.

Thus, we have:

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

$$\therefore \angle QMC = 180^\circ - \angle DMQ = 180^\circ - 100^\circ = 80^\circ$$

Thus,

$$\angle DMQ = \angle BLM = 100^\circ \quad (\text{Corresponding angles})$$

$$\angle DMQ = \angle CML = 100^\circ \quad (\text{Vertically opposite angles})$$

$$\angle BLM = \angle PLA = 100^\circ \quad (\text{Vertically opposite angles})$$

Also,

$$\angle CMQ = \angle ALM = 80^\circ \quad (\text{Corresponding angles})$$

$$\angle CMQ = \angle DML = 80^\circ \quad (\text{Vertically opposite angles})$$

$$\angle ALM = \angle PLB = 80^\circ \quad (\text{Vertically opposite angles})$$

Lines and angles Ex 14.2 Q8

Answer :

In the given figure, $l \parallel m$ and $p \parallel q$.

Thus, we have:

$$\angle z = 80^\circ \quad (\text{Vertically opposite angles})$$

$$\angle z = \angle t = 80^\circ \quad (\text{Corresponding angles})$$

$$\angle z = \angle y = 80^\circ \quad (\text{Corresponding angles})$$

$$\angle x = \angle y = 80^\circ \quad (\text{Corresponding angles})$$

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