



Lines and angles Ex 14.2 Q4

**Answer :**

In this given Fig., line  $l \parallel m$ .

Here,

Alternate angle to  $\angle 13$  is  $\angle 7$ .

Corresponding angle to  $\angle 15$  is  $\angle 7$ .

Alternate angle to  $\angle 15$  is  $\angle 5$ .

Lines and angles Ex 14.2 Q5

**Answer :**

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

Here,

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

$$\therefore \angle 2 = 180^\circ - \angle 1 = 180^\circ - 40^\circ = 140^\circ$$

$$\angle 5 = \angle 1 = 40^\circ \quad (\text{Corresponding angles})$$

$$\angle 3 = \angle 1 = 40^\circ \quad (\text{Vertically opposite angles})$$

$$\angle 7 = \angle 3 = 40^\circ \quad (\text{Corresponding angles})$$

$$\angle 7 = \angle 5 = 40^\circ \quad (\text{Vertically opposite angles})$$

Also,

$$\angle 2 = \angle 6 = 140^\circ \quad (\text{Corresponding angles})$$

$$\angle 2 = \angle 4 = 140^\circ \quad (\text{Vertically opposite angles})$$

$$\angle 4 = \angle 8 = 140^\circ \quad (\text{Corresponding angles})$$

$$\angle 8 = \angle 6 = 40^\circ \quad (\text{Vertically opposite angles})$$

Thus,

$$\angle 2 = \angle 8, \angle 3 = \angle 5, \angle 6 = \angle 4, \angle 1 = \angle 7$$

Hence, alternate angles are equal.

\*\*\*\*\* END \*\*\*\*\*