Lines and angles Ex 14.1 Q13

Answer :

Two adjacent angles are said to form a linear pair of angles if their non-common arms are two opposite rays.

$\angle 1$ and $\angle 2$
$\angle 2$ and $\angle 3$
$\angle 3$ and $\angle 4$
$\angle 1$ and $\angle 4$
$\angle 5$ and $\angle 6$
$\angle 6$ and $\angle 7$
$\angle 7$ and $\angle 8$
$\angle 8$ and $\angle 5$
$\angle 9$ and $\angle 10$
$\angle 10$ and $\angle 11$
$\angle 11$ and $\angle 12$
$\angle 12$ and $\angle 9$

Two angles formed by two intersecting lines having no common arms are called vertically opposite angles.

$\angle 1$ and $\angle 3$
$\angle 4$ and $\angle 2$
$\angle 5$ and $\angle 7$
$\angle 6$ and $\angle 8$
$\angle 9$ and $\angle 11$
$\angle 10$ and $\angle 12$

Lines and angles Ex 14.1 Q14

Answer :

Since OE is the bisector of $\angle BOD$,

$\therefore \angle DOE = \angle EOB$

$\angle 2 + \angle 1 + \angle EOB = 180°$ \qquad (Linear Pair)

$\angle 2 + 2\angle 1 = 180°$ \qquad ($\angle 1 = \angle EOB$)

$\Rightarrow \angle 2 = 180° - 2\angle 1 = 180° - 2 \times 70° = 180° - 140° = 40°$

$\angle 4 = \angle 2 = 40°$ \qquad (Vertically opposite angles)

$\angle 3 = \angle DOB = \angle 1 + \angle EOB = 70° + 70° = 140°$

$[\angle 3 = \angle DOB$ (Vertically opposite angles)$]$

Lines and angles Ex 14.1 Q15

Answer :

One angle of a linear pair is the right angle, i.e., 90°.

$\therefore$ The other angle = 180° − 90° = 90°

********** END *********