

Understanding shapes-III special types of quadrilaterals Ex 17.1 Q3 **Answer:**

- (i)No. This is because the opposite angles are not equal.
- (ii)Yes. This is because the opposite sides are equal.
- (ii)No, This is because the diagonals do not bisect each other.

Understanding shapes-III special types of quadrilaterals Ex 17.1 Q4 **Answer**:

$$\label{eq:hopping} \begin{split} \angle HOP + 70^\circ &= 180^\circ \quad (l\text{inear pair}) \\ \angle HOP &= 180^\circ - 70^\circ = 110^\circ \\ \mathbf{x} &= \angle HOP = 110^\circ \quad (o\text{pposite angles of a parallelogram are equal}) \\ \angle EHP + \angle HEP &= 180^\circ \quad (s\text{ um of adjacent angles of a parallelogram is }180^\circ) \\ 110^\circ + 40^\circ + \mathbf{z} &= 180^\circ \\ \mathbf{z} &= 180^\circ - 150^\circ = 30^\circ \\ \mathbf{y} &= 40^\circ \quad (\text{alternate angles}) \end{split}$$

Understanding shapes-III special types of quadrilaterals Ex 17.1 Q5 **Answer:**

(i)

Opposite sides are equal in a parallelogram.

$$\therefore 3y - 1 = 26$$

$$3y = 27$$

$$y = 9$$

Similarly, 3x = 18

$$\mathbf{x} = 6$$

(ii)

Diagonals bisect each other in a parallelogram.

$$y - 7 = 20$$

$$y = 27$$

$$x - y = 16$$

$$x - 27 = 16$$

$$x = 43$$

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