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(Affiliated to CBSE up to +2 Level)

CLASS: X

SUB.: MATHS (NCERT BASED)

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EXERCISE 6.2

1. In Fig. 6.17, (i) and (ii), $DE \parallel BC$. Find EC in (i) and AD in (ii).

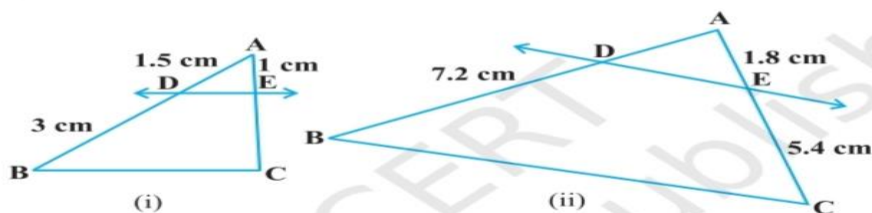


Fig. 6.17

2. E and F are points on the sides PQ and PR respectively of a $\triangle PQR$. For each of the following cases, state whether $EF \parallel QR$:

- (i) $PE = 3.9$ cm, $EQ = 3$ cm, $PF = 3.6$ cm and $FR = 2.4$ cm
- (ii) $PE = 4$ cm, $QE = 4.5$ cm, $PF = 8$ cm and $RF = 9$ cm
- (iii) $PQ = 1.28$ cm, $PR = 2.56$ cm, $PE = 0.18$ cm and $PF = 0.36$ cm

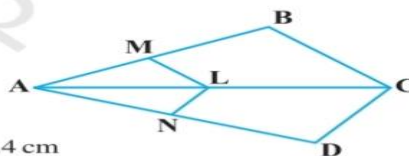


Fig. 6.18

3. In Fig. 6.18, if $LM \parallel CB$ and $LN \parallel CD$, prove that

$$\frac{AM}{AB} = \frac{AN}{AC}$$

4. In Fig. 6.19, $DE \parallel AC$ and $DF \parallel AE$. Prove that

$$\frac{BF}{FE} = \frac{BE}{EC}$$

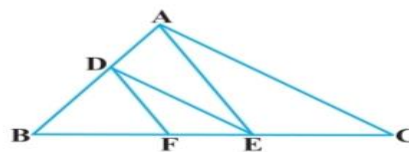


Fig. 6.19

To complete this exercise

- 5. In Fig. 6.20, $DE \parallel OQ$ and $DF \parallel OR$. Show that $EF \parallel QR$.
- 6. In Fig. 6.21, A , B and C are points on OP , OQ and OR respectively such that $AB \parallel PQ$ and $AC \parallel PR$. Show that $BC \parallel QR$.
- 7. Using Theorem 6.1, prove that a line drawn through the mid-point of one side of a triangle parallel to another side bisects the third side. (Recall that you have proved it in Class IX).
- 8. Using Theorem 6.2, prove that the line joining the mid-points of any two sides of a triangle is parallel to the third side. (Recall that you have done it in Class IX).
- 9. $ABCD$ is a trapezium in which $AB \parallel DC$ and its diagonals intersect each other at the point O . Show

$$\text{that } \frac{AO}{BO} = \frac{CO}{DO}.$$

10. The diagonals of a quadrilateral $ABCD$ intersect each other at the point O such that

$$\frac{AO}{BO} = \frac{CO}{DO}. \text{ Show that } ABCD \text{ is a trapezium.}$$

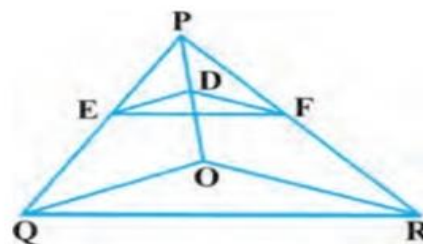


Fig. 6.20

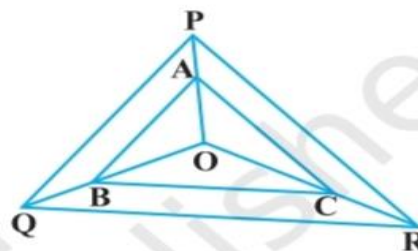


Fig. 6.21