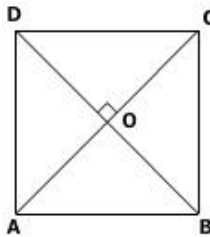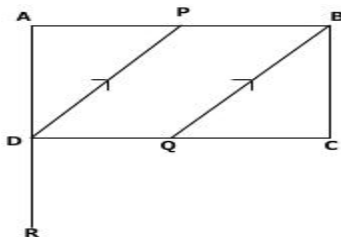# JSUNIL TUTORIAL

PANJABI COLONY GALI 01, SAMASTIPUR

Q U A D R I L A T E R A L   I X - 3

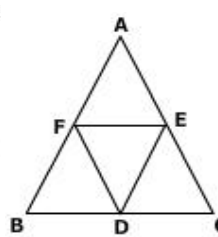1. In fig 9.17, ABCD is a rhombus. Show that diagonal AC bisects <a as well as <C and diagonal BD bisects <B as well as <D.
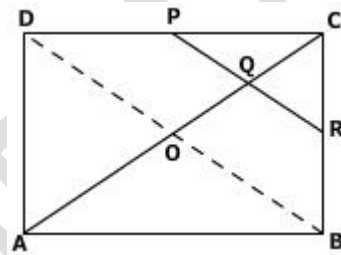

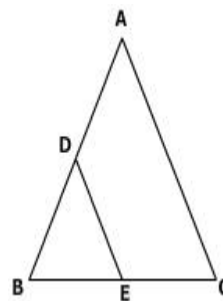In fig 9.17   in fig 9.18   in fig 9.19   in fig 9.20

2. In fig 9.18, P is the mid-point of side AB of a parallelogram ABCD. A line through B parallel to PD meets DC at Q and AD produced at R. Prove that (i) AR = 2BC (ii) BR = 2BQ.

3. In fig 9.19 a triangle ABC, <A= 50^0, <B = 60^0 and< C= 70^0 . Find the measures of angles of the triangle formed by joining the mid-points of the sides of this triangle.

4. ABCD is a parallelogram in which P is the mid-point of DC and Q is point on AC such that CQ= ¼ AC. If PQ when produced meets BC at R, prove that R is a mid-point of BC.

5. In fig 9.20, ABCD and PQRC are rectangles and Q is the mid-point of AC. Prove that (i) DP = PC (ii) PR= ½ AC

6. In fig 9.21, AD is a median of triangle ABC and E is the mid-point of AD. Also BE on producing meets AC in F. Prove that AF= 1/3 AC.

7. in fig 9.22, AB= 8.4cm, PR= 5cm and PQ = 4.8cm. Find the lengths of BC, CA and QR.

8. In fig 9.23triangle ABC, D is the mid-point of AB and E is the mid-point of BC. Calculate (i) DE if AC = 6.4cm, (ii) < DEB if < ACB= 63^0

9. In fig 9.24, two points A and B lie on the same side of a line XY. If AD II XY, BE II XY and C is the mid-point of AB. Prove that CD = CE.
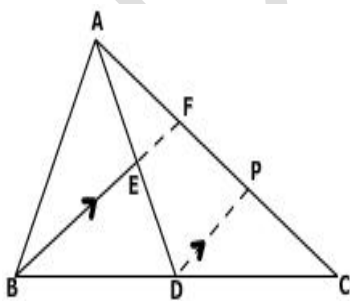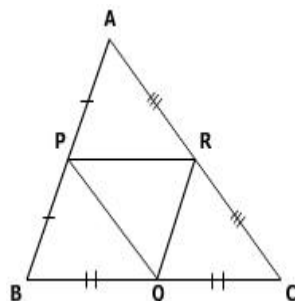
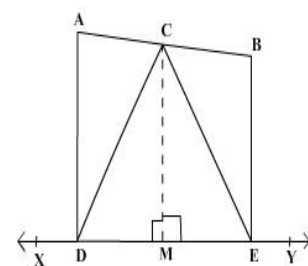in fig 9.21   in fig 9.22   in fig 9.23   in fig 9.24