Chapter- 8

Quadrilaterals

WORKSHEET

1 Mark

(1) ABCD is a rhombus with $\angle ABC = 40^0$. The measure of $\angle ACD$ is

(a) 90^0 (b) 20^0 (c) 40^0 (d) 70^0

(2) ABCD is a rectangle with $\angle ABC = 32^0$. The measure of $\angle DBC$ is

(a) 68^0 (b) 32^0 (c) 112^0 (d) 75^0

(3) ABCD is a square. The measure of $\angle BCA$ is

(a) 30^0 (b) 45^0 (c) 60^0 (d) 75^0

(4) If APB and CQD are two parallel lines, then the bisectors of the angles APQ, BPQ, CQP and POD from

(a) a square (b) a rhombus

(c) a rectangle (d) any other parallelogram

(5) D and E are the mid-points of the sides AB and AC of Δ ABC and O is any point on side BC. O is joined to A. If P and Q are the mid-points of OB and OC respectively, then DEQP is

(a) a square (b) a rectangle

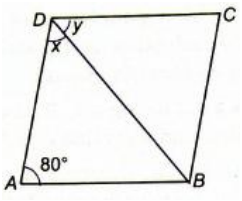
(c) a rhombus (d) a parallelogram

(6) If the diagonals of a parallelogram are equal and perpendicular to each other, then it is a _____.

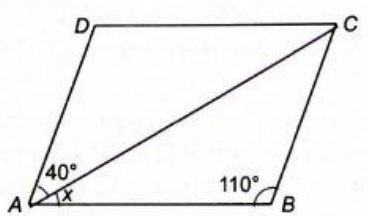
(7) The line-segment joining the midpoints of any two sides of a triangle is _____to the third side and is _____ of it.

(8) A line drawn through the midpoint of a side of a triangle parallel to another side _____ the third side.

(9) In figure, ABCD is a rhombus. Find the values of x and y.



(10) In figure, ABCD is a parallelogram with $\angle B = 110^0$. Find the value of x.



2 Marks

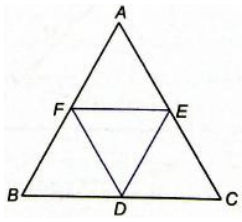
(11) The angles of quadrilateral are in the ratio 1 : 3 : 5 : 6. Find its smallest angle.

(12) Can the angles 110^0, 80^0, 70^0 and 95^0 be the angles of a quadrilateral? Why or why not?

(13) Can all the four angles of a quadrilateral be obtuse angles? Give reason for your answer.

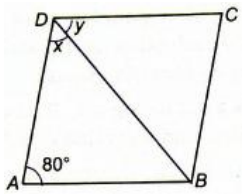
(14) Can all the angles of a quadrilateral be acute angles? Give reason for your answer.

(15) In figure, it is given that BDEF and FDCE are parallelograms. Can you say that BD=CD? Why or why not?



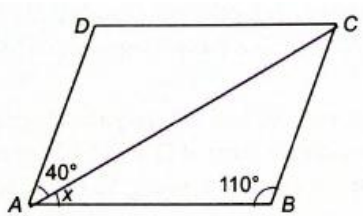
3 Marks

(16) In figure, ABCD is a rhombus. Find the values of x and y.

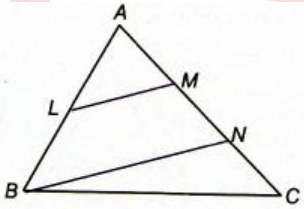


(17) The angles of quadrilateral are in the ratio 1 : 3 : 5 : 6. Find its smallest angle.

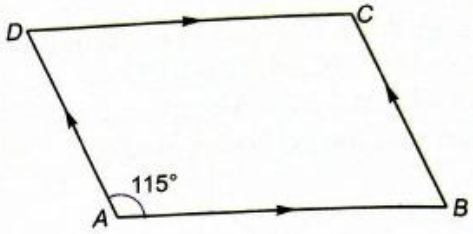
(18) In figure, ABCD is a parallelogram with $\angle B = 110^0$. Find the value of x.



(19) In figure, ABC is a triangle in which L is the mid-point of AB and N is a point on AC such that AN = 2CN. A line through L, parallel to BN, meets AC at M. Prove that AM = CN.

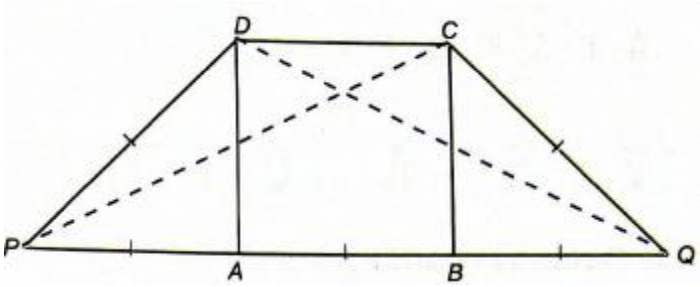


(20) In figure, ABCD is a parallelogram in which $\angle A = 115^0$. Find $\angle B$, $\angle C$ and $\angle D$.

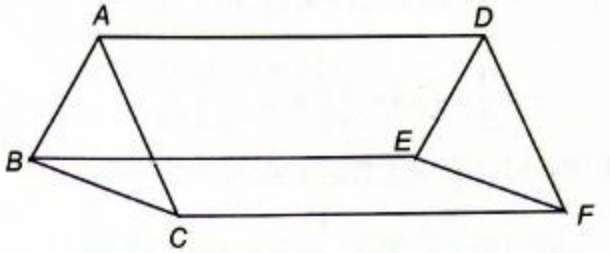


4 Marks

(21) In figure, ABCD is a square. Side AB is produced to points P and Q in such a way that PA = AB = BQ. Prove that DQ = CP.

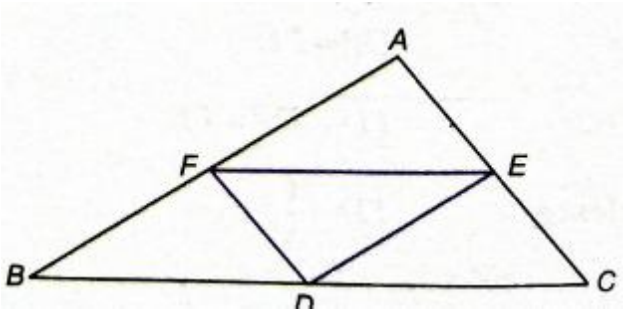


(22) In figure. AB||DE, AB = DE, AC||DF and AC=DF. Prove that BC||EF and BC= EF.

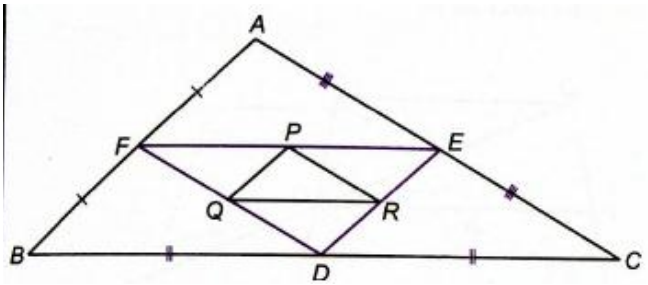


(23) In Fig. in ΔABC, D, E and F are the mid-points of BC, CA and AB respectively. Given BD = 3.5 cm, AC = 3.8 cm and DE=2.7 cm, find the lengths of

(i) FE (ii) FD (iii) AF (iv) AB



(24) In figure, in ΔABC, D, E and F are the mid-points of BC, CA and AB respectively. P, Q an R are the mid-points of EF, FD and DE respectively. If AB = 3.6 cm, BC= 6.8 cm and CA = 4.8 cm, find the sides of the ΔPQR.



(25) In figure L, M and N are the mid-points of AP, BP and CP respectively. Prove that the triangle ABC and LMN are equiangular.