Quadrilaterals

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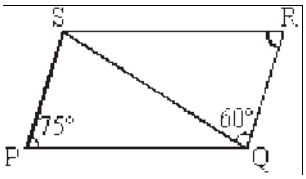
1.From the figure parallelogram PQRS, the values of $\angle$SQP and $\angle$QSP are



(A) 45° (B) 60°, 45° (C) 45°, 45°. (D) 60°, 60°.

2.Which of the following statements is true ?

(A) The diagonals of a rectangle are perpendicular. (B) The diagonals of a rhombus are equal.

(C) Every square is not a rhombus. (D) None of these

3.Choose the correct statement.

(A) The diagonals of a parallelogram are equal

(B) The diagonals of a rectangle are perpendicular to each other

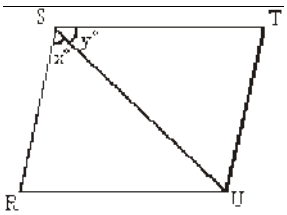
(C) If the diagonals of a quadrilateral intersect at right angles, it is not necessarily a rhombus.

(D) Every quadrilateral is either a trapezium or a parallelogram or a kite.

4.In a trapezium ABCD, AB || CD. If $\angle$A = 95° then $\angle$D =?

(A) 110° (B) 85° (C) 70° (D) 310°

5.RSTU is a parallelogram as shown in the figure below. Then the shown angles x and y are related as



(A) x = y. (B) x < y. (C) x > y. (D) cannot be determined from given data.

6.In a rhombus ABCD, the diagonals intersect at O. If AB = 21 cm, diagonal BD = 16 cm, then the length of the diagonal AC is …….

(A) 38.82 cm (B) 40 cm (C) 50 cm (D) none

7.In a parallelogram ABCD, AB = 9 cm and BC = 7 cm. Each of its diagonals is less than .....

(A) 3 cm (B) 4 cm (C) 7 cm (D) 16 cm

8.In a parallelogram ABCD $\angle B = 160°$,then find the measurement of $\angle$ C.

(A) 20° (B) 65° (C) 90° (D) 75°

9.In a parallelogram ABCD, if AB = 3x - 4, CD = y - 1, AD = y + 5 and BC = 5x - 8 ,then ratio of AB : BC is

(A) 71 : 21 (B) 12 : 11 (C) 11 : 17 (D) 4 : 7

10.In a square ABCD, its diagonals bisect at O. Then the triangle AOB is

(A) an equilateral triangle. (B) an isosceles but not right angled triangle.

(C) a right angled but not an isosceles triangle. (D) an isosceles right angled triangle.

11.The angles of a quadrilateral are x°, x-10°, x + 52° and 3x°. Find the greatest angle.

(A) 159° (B) 180° (C) 68° (D) None

12.The sum of the angles of a quadrilateral is

(A) depends adjacent side. (B) 360°.

(C) depends adjacent angle. (D) depends on the quadrilateral.

13.The diameter of circumcircle of a rectangle is 13 cm and breadth of the rectangle is 5 cm. Its length is

(A) 6 cm (B) 5 cm (C) 12 cm (D) none

14.Which of the following statement is/are false ?

(A) Each diagonal of a quadrilateral divides it into two triangles.

(B) Each side of a quadrilateral is less than the sum of the remaining three sides.

(C) A quadrilateral can at most have two obtuse angles.

(D) A quadrilateral has four diagonals.

15.In a Rhombus ABCD, if AD = AC then $\angle$ DCB ……..

(A) 60° (B) 120° (C) 72° (D) 108°

16.A quadrilateral is a rhombus but not a square if

(A) its diagonals do not bisect each other. (B) its diagonals are not perpendicular.

(C) opposite angles are not equal. (D) the length of diagonals are not equal.

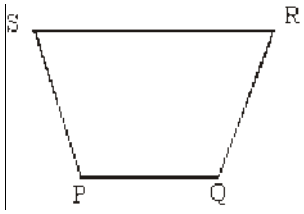
17.ABCD is a quadrilateral. If AC and BD bisect each other, then ABCD must be

(A) square. (B) rectangle. (C) parallelogram. (D) rhombus.

18.The diagonals of a parallelogram ABCD intersect at O. If $\angle$ BOC = 90° and $\angle$ BDC = 65°, then $\angle$ OAB is

(A) 10° (B) 25° (C) 50° (D) 90°

19.If angles P, Q, R and S of the quadrilateral PQRS, taken in order, are in the ratio 3 : 7 : 6 : 4, then PQRS is a



(A) rhombus (B) parallelogram (C) kite (D) none

20.To construct a parallelogram, the minimum number of measurements required is

(A) 2 (B) 6 (C) 4 (D) None

21.ABCD is a square. E, F, G, H are the mid-points of the four sides. Then the figure EFGH is

(A) square (B) rectangle (C) trapezium (D) parallelogram

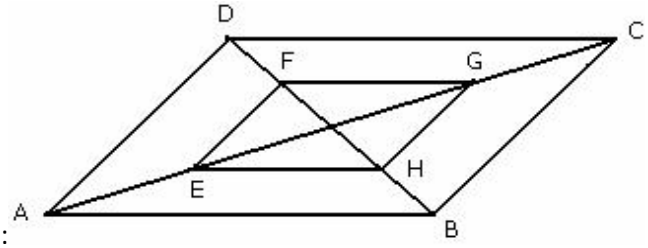
22.A quadrilateral having exactly one pair of parallel sides, is called?

23.If each pair of opposite sides of a quadrilateral is equal, then it

is a_____

24.In a parallelogram sum of two consecutive angles is _____

25.ABCD is a parallelogram. The diagonals AC and BD intersect at a point O. If E, F, G and H are the mid points of AO, DO, CO and BO respectively, then the ratio of (EF+FG+GH+HE) to (AD+DC+CB+BA) is:



(A) 1:1 (B) 1:2 (C) 1:3 (D) 1:4

26.ABCD is a parallelogram in which $\angle A$=70^0, $\angle B$=90^0 and $\angle C$ =100^0. How many points in the plane P of the quadrilateral are there such that P is equidistant from its vertices?

(A) None (B) 1 (C) 2 (D) 3

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27.The angles of quadrilateral are respectively $100°,30°,92°,x°$ find the value of x

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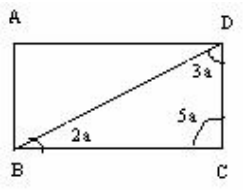
28.Find the value of a and also find angles related to a as shown in figuer.



29.Prove that angle bisectors of a parallelogram form a rectangle.

30.ABC be an isosceles triangle with AB = AC and let D,F,E are the mid-points of BC,CA and AB respectively. Show that AD perpendicular to EF and AD bisector of EF.

31.In a triangle ABC median AD is produced to X such that AD=DX. Prove that ABXC is a parallelogram.

32.ABCD is parallelogram. P is a point on AD such that AP = 1/3 AD and Q is a point on BC such that CQ = 1/3 BC. Prove that AQCP is a parallelogram.

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33.ABCD is a Rhombus AD is produced to E so that DE = DC and EC produced meets AB produced in F. prove that BF=BC

34.In a quadrilateral ABCD, CO and DO are the bisector of angle C and angle D respectively . prove that $\angle COD = \frac{1}{2}(\angle A + \angle B)$

35.In Triangle ABC, AD is the median through A and E is the mid-point of AD. BE produced meets AC in F proved that AF = 1/3 AC.

36.Show that the quadrilateral formed by joining the mid point of the consecutive sides of a rectangle is a rhombus.

37.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 AR = 2BC

38.P,Q,R are, respectively, the mid points of sides BC,CA and AB of a triangle ABC. PR and BQ meet at X. CR and PQ meet at Y. Prove that XY = ¼ BC.