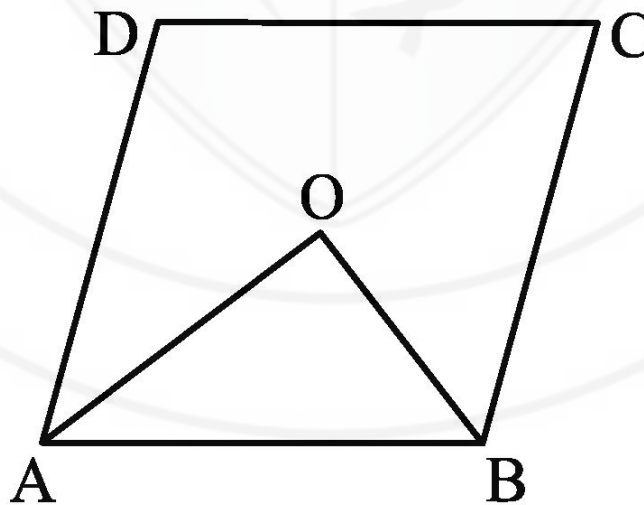


1. The bisectors of angles of a parallelogram form a :  
 (a) trapezium (b) rectangle (c) rhombus (d) kite
2. The angles of a quadrilaterals are in the ratio 3 : 4 : 5 : 6. The respective angles of the quadrilaterals are  
 (a)  $60^{\circ}$ ,  $80^{\circ}$ ,  $100^{\circ}$ ,  $120^{\circ}$  (b)  $120^{\circ}$ ,  $100^{\circ}$ ,  $80^{\circ}$ ,  $60^{\circ}$   
 (c)  $120^{\circ}$ ,  $60^{\circ}$ ,  $80^{\circ}$ ,  $100^{\circ}$  (d)  $80^{\circ}$ ,  $100^{\circ}$ ,  $120^{\circ}$ ,  $60^{\circ}$ .
3. If diagonals of a quadrilateral are equal and bisect each other at right angles, then it is a:  
 (a) parallelogram (b) square (c) rhombus (d) trapezium
4. If in rectangle ABCD, diagonal AC bisects  $\angle A$  as well  $\angle C$ , then ABCD is a:  
 (a) parallelogram (b) square (c) rhombus (d) trapezium
5. The line segment joining the midpoints of two sides of a triangle is parallel to the third side and \_\_\_\_\_ of it.  
 (a) half (b) one third (c) one fourth (d) equal
6. Line segment joining the mid points of the opposite sides of a quadrilateral \_\_\_\_\_ each other.  
 (a) trisect (b) bisect (c) coincide (d) none of these.
7. Three angles of a quadrilateral are  $75^{\circ}$ ,  $90^{\circ}$  and  $75^{\circ}$ . The fourth angle is  
 (a)  $90^{\circ}$  (b)  $95^{\circ}$  (c)  $105^{\circ}$  (d)  $120^{\circ}$
8. A diagonal of a rectangle is inclined to one side of the rectangle at  $25^{\circ}$ . The acute angle between the diagonals is  
 (a)  $55^{\circ}$  (b)  $50^{\circ}$  (c)  $40^{\circ}$  (d)  $25^{\circ}$
9. ABCD is a rhombus such that  $\angle ACB = 40^{\circ}$ , then  $\angle ADB =$   
 (a)  $45^{\circ}$  (b)  $50^{\circ}$  (c)  $40^{\circ}$  (d)  $60^{\circ}$
10. The quadrilateral formed by joining the midpoints of the sides of a quadrilateral PQRS, taken in order, is a rectangle, if  
 (a) PQRS is a rectangle (b) PQRS is an parallelogram  
 (c) diagonals of PQRS are perpendicular (d) diagonals of PQRS are equal.
11. The quadrilateral formed by joining the midpoints of the sides of a quadrilateral PQRS, taken in order, is a rhombus, if  
 (a) PQRS is a rhombus (b) PQRS is an parallelogram  
 (c) diagonals of PQRS are perpendicular (d) diagonals of PQRS are equal.
12. If angles A, B, C and D of the quadrilateral ABCD, taken in order are in the ratio 3:7:6:4, then ABCD is a  
 (a) parallelogram (b) kite (c) rhombus (d) trapezium

- If bisectors of  $\angle A$  and  $\angle B$  of a quadrilateral ABCD intersect each other at P, of  $\angle B$  and  $\angle C$  at Q, of  $\angle C$  and  $\angle D$  at R and of  $\angle D$  and  $\angle A$  at S, then PQRS is a
  - parallelogram
  - rectangle
  - rhombus
  - quadrilateral whose opposite angles are supplementary.
- If APB and CQD are two parallel lines then bisectors of the angles APQ, BPQ, CQP and PQD form a
  - parallelogram
  - square
  - rhombus
  - rectangle
- The figure obtained the midpoints of the sides of the sides of a rhombus, taken in order is a
  - parallelogram
  - square
  - rhombus
  - rectangle
- D and E are the midpoints of the sides AB and AC of  $\triangle ABC$  and O is any point on side BC. O is joined to A. If P and Q are the midpoints of OB and OC respectively, then DEQP is a
  - parallelogram
  - square
  - rhombus
  - rectangle
- The quadrilateral formed by joining the midpoints of the sides of a quadrilateral PQRS, taken in order, is a square only if
  - PQRS is a rhombus
  - diagonals of PQRS are equal and perpendicular
  - diagonals of PQRS are perpendicular
  - diagonals of PQRS are equal.
- The diagonals AC and BD of a parallelogram ABCD intersect each other at the point O. If  $\angle DAC = 32^\circ$  and  $\angle AOB = 70^\circ$ , then  $\angle DBC$  is equal to
  - $24^\circ$
  - $86^\circ$
  - $38^\circ$
  - $32^\circ$
- Which of the following is not true for a parallelogram?
  - opposite sides are equal
  - opposite angles are bisected by the diagonals
  - opposite angles are equal
  - diagonals bisect each other.
- D and E are the midpoints of the sides AB and AC of  $\triangle ABC$ . DE is produced to F. To prove that CF is equal and parallel to DA, we need an additional information which is
  - $\angle DAE = \angle EFC$
  - $AE = EF$
  - $DE = EF$
  - $\angle ADE = \angle ECF$
- The bisectors of any two adjacent angles of a parallelogram intersect at
  - $45^\circ$
  - $30^\circ$
  - $90^\circ$
  - $60^\circ$
- The bisectors of the angles of a parallelogram enclose a
  - parallelogram
  - square
  - rhombus
  - rectangle
- ABCD is a parallelogram and E and F are the centroid of triangle ABD and BCD respectively, then EF =
  - AE
  - BE
  - CE
  - DE
- ABCD is a parallelogram, M is the midpoint of BD and BM bisects  $\angle B$ , then  $\angle AMB =$ 
  - $45^\circ$
  - $75^\circ$
  - $90^\circ$
  - $60^\circ$

- Given four points A, B, C, D such that three points A, B, C are collinear. By joining these points in order, we get  
(a) a straight line (b) a triangle (c) quadrilateral (d) none of these
- In quadrilateral ABCD,  $AB = BC$  and  $CD = DA$ , then the quadrilateral is a  
(a) parallelogram (b) rhombus (c) kite (d) trapezium
- Given a triangular prism, then what can we conclude about the lateral faces.  
(a) faces are rectangular (b) faces are parallelogram  
(c) faces are trapeziums (d) square
- The bisectors of the angles of parallelogram enclose a  
(a) parallelogram (b) rhombus (c) rectangle (d) square
- Which if the following quadrilateral a rhombus?  
(a) diagonals bisect each other (b) all the four sides are equal  
(c) diagonals bisect opposite angles (d) one angle between the diagonals is  $60^\circ$ .
- Consecutive angles of parallelogram are  
(a) equal (b) supplementary (c) complementary (d) none of these
- Given a rectangle ABCD and P, Q, R, S midpoints of AB, BC, CD and DA respectively. Length of diagonal of rectangle is 8 cm, the quadrilateral PQRS is  
(a) parallelogram with adjacent sides 4 cm (b) rectangle with adjacent sides 4 cm  
(c) rhombus with side 4 cm (d) square with side 4 cm
- In parallelogram ABCD, bisectors of angles A and B intersect each other at O. The value of  $\angle AOB$  is:  
(a)  $30^\circ$  (b)  $60^\circ$  (c)  $90^\circ$  (d)  $120^\circ$



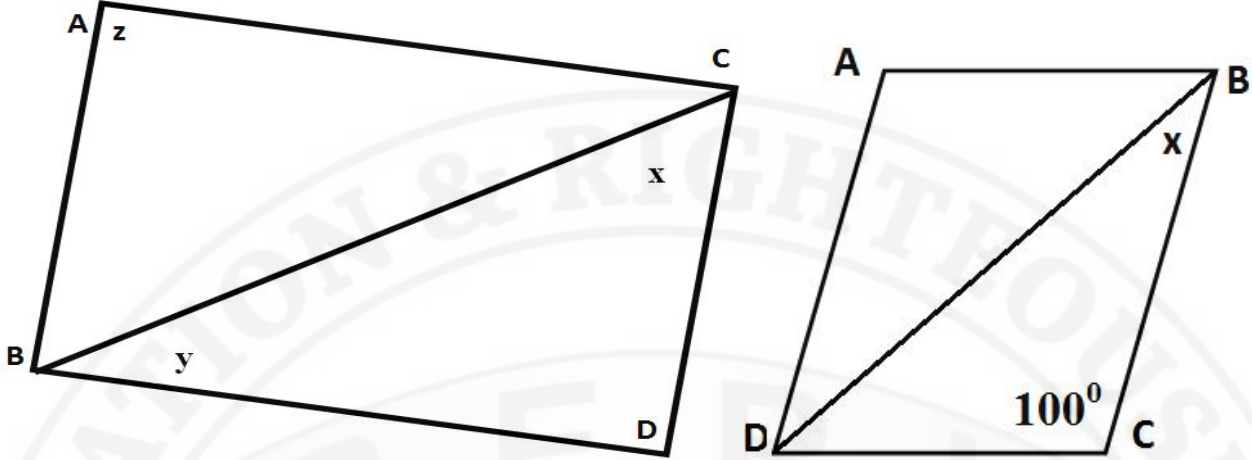
- If an angle of a parallelogram is two-third of its adjacent angle, the smallest angle of the parallelogram is  
(a)  $108^\circ$  (b)  $54^\circ$  (c)  $72^\circ$  (d)  $81^\circ$

10. If the degree measures of the angles of quadrilateral are  $4x$ ,  $7x$ ,  $9x$  and  $10x$ , what is the sum of the measures of the smallest angle and largest angle?

- (a)  $140^\circ$  (b)  $150^\circ$  (c)  $168^\circ$  (d)  $180^\circ$

11. In the given figure ABCD is a parallelogram, what is the sum of the angle  $x$ ,  $y$  and  $z$ ?

- (a)  $140^\circ$  (b)  $150^\circ$  (c)  $168^\circ$  (d)  $180^\circ$

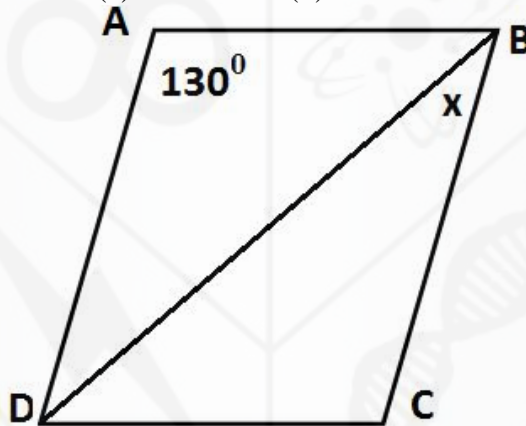


12. In the above figure ABCD is a rhombus, then the value of  $x$  is

- (a)  $40^\circ$  (b)  $50^\circ$  (c)  $60^\circ$  (d)  $80^\circ$

13. In the below figure ABCD is a rhombus, then the value of  $x$  is

- (a)  $20^\circ$  (b)  $25^\circ$  (c)  $30^\circ$  (d)  $50^\circ$



14. ABCD is a parallelogram and  $AB = 12\text{cm}$ ,  $AD = 8\text{ cm}$  then perimeter of parallelogram ABCD is

- (a) 20 cm (b) 40 cm (c) 60 cm (d) 80 cm

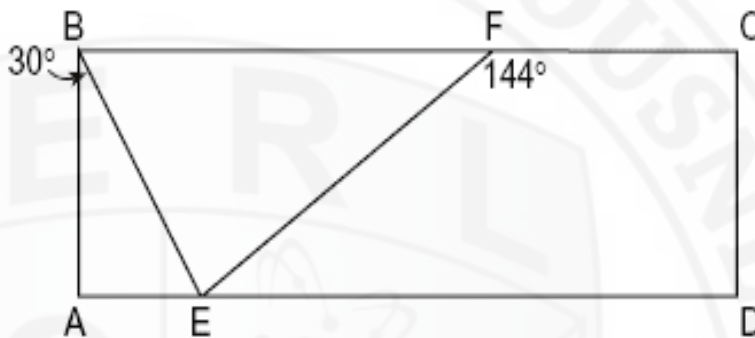
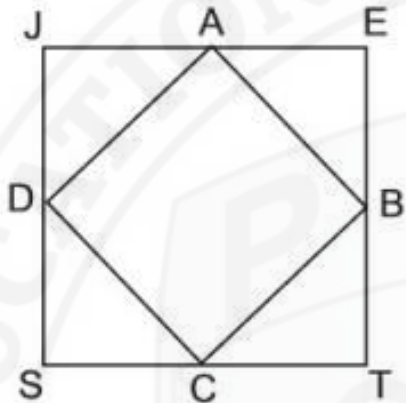
15. In parallelogram CARS,  $m\angle C = 5x - 20$  and  $m\angle A = 3x + 40$ . Find the value of  $x$ .

- (a) 15 (b) 20 (c) 30 (d) 130



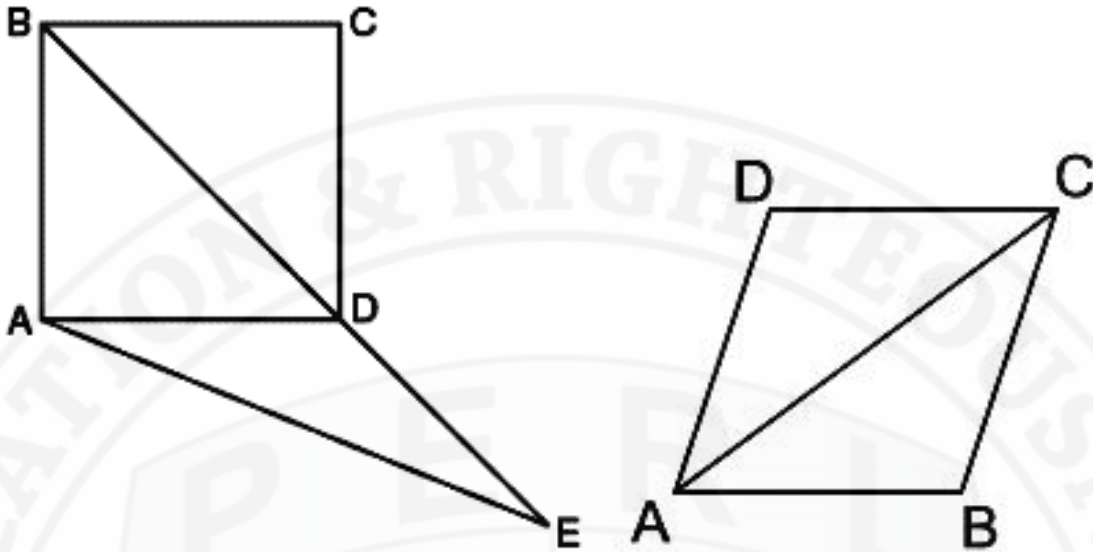
1. If two consecutive sides of a rhombus are represented by  $3x - 6$  and  $x + 14$ , then the perimeter of the rhombus is  
 (a) 10            (b) 24            (c) 70            (d) 96

2. Points  $A, B, C,$  and  $D$  are midpoints of the sides of square  $JETS$ . If the area of  $JETS$  is 36, the area of  $ABCD$  is  
 (a)  $9\sqrt{2}$     (b)  $18\sqrt{2}$     (c) 9            (d) 18



3. In the accompanying above diagram of rectangle  $ABCD$ ,  $m\angle ABE = 30$  and  $m\angle CFE = 144$ . Find  $m\angle BEF$ .  
 (a)  $36^\circ$             (b)  $60^\circ$             (c)  $84^\circ$             (d)  $90^\circ$
4. A quadrilateral must be a parallelogram if one pair of opposite sides is  
 (a) congruent, only.    (b) parallel and the other pair of opposite sides is congruent.  
 (c) congruent and parallel.    (d) parallel only
5. The perimeter of a rhombus is 60. If the length of its longer diagonal measures 24, the length of the shorter diagonal is  
 (a) 20            (b) 18            (c) 15            (d) 9
6. Find the perimeter of a rhombus whose diagonals measure 12 and 16.  
 (a) 10            (b) 20            (c) 40            (d) 80
7. Which statement is true about all parallelograms?  
 (a) The diagonals are congruent.  
 (b) The area is the product of two adjacent sides.  
 (c) The opposite angles are congruent.  
 (d) The diagonals are perpendicular to each other.
8. Which property is true for all trapezoids?  
 (a) Only two opposite sides are parallel.  
 (b) Consecutive angles are supplementary.  
 (c) The base angles are congruent.  
 (d) All angles are equal.

9. In the diagram at the right,  $ABCD$  is a square, diagonal  $BD$  is extended through  $D$  to  $E$ .  $AD = DE$  and  $AE$  is drawn as given in figure. What is  $m\angle DAE$  ?  
 (a) 22.5      (b) 45.0      (c) 112.5      (d) 135.0



10. In the above right sided diagram of rhombus  $ABCD$ ,  $m\angle CAB = 35^\circ$ . Find  $m\angle CDA$ .  
 (a)  $35^\circ$       (b)  $70^\circ$       (c)  $110^\circ$       (d)  $140^\circ$
11. In rectangle  $DATE$ , diagonals  $DT$  and  $AE$  intersect at  $S$ . If  $AE = 40$  and  $ST = x + 5$ , find the value of  $x$ .  
 (a) 10      (b) 18      (c) 15      (d) 20
12. A parallelogram must be a rectangle if its diagonals  
 (a) bisect each other.  
 (b) bisect the angles to which they are drawn.  
 (c) are perpendicular to each other.  
 (d) are congruent.

- Three angles of a quadrilateral are  $75^\circ$ ,  $90^\circ$  and  $75^\circ$ . The fourth angle is  
(A)  $90^\circ$  (B)  $95^\circ$  (C)  $105^\circ$  (D)  $120^\circ$
- A diagonal of a rectangle is inclined to one side of the rectangle at  $25^\circ$ . The acute angle between the diagonals is  
(A)  $55^\circ$  (B)  $50^\circ$  (C)  $40^\circ$  (D)  $25^\circ$
- ABCD is a rhombus such that  $\angle ACB = 40^\circ$ . Then  $\angle ADB$  is  
(A)  $40^\circ$  (B)  $45^\circ$  (C)  $50^\circ$  (D)  $60^\circ$
- The quadrilateral formed by joining the mid-points of the sides of a quadrilateral PQRS, taken in order, is a rectangle, if  
(A) PQRS is a rectangle  
(B) PQRS is a parallelogram  
(C) diagonals of PQRS are perpendicular  
(D) diagonals of PQRS are equal.
- The quadrilateral formed by joining the mid-points of the sides of a quadrilateral PQRS, taken in order, is a rhombus, if  
(A) PQRS is a rhombus  
(B) PQRS is a parallelogram  
(C) diagonals of PQRS are perpendicular  
(D) diagonals of PQRS are equal.
- If angles A, B, C and D of the quadrilateral ABCD, taken in order, are in the ratio 3:7:6:4, then ABCD is a  
(A) rhombus (B) parallelogram  
(C) trapezium (D) kite
- If bisectors of  $\angle A$  and  $\angle B$  of a quadrilateral ABCD intersect each other at P, of  $\angle B$  and  $\angle C$  at Q, of  $\angle C$  and  $\angle D$  at R and of  $\angle D$  and  $\angle A$  at S, then PQRS is a  
(A) rectangle (B) rhombus (C) parallelogram  
(D) quadrilateral whose opposite angles are supplementary
- If APB and CQD are two parallel lines, then the bisectors of the angles APQ, BPQ, CQP and PQD form  
(A) a square (B) a rhombus  
(C) a rectangle (D) any other parallelogram
- The figure obtained by joining the mid-points of the sides of a rhombus, taken in order, is  
(A) a rhombus (B) a rectangle  
(C) a square (D) any parallelogram
- D and E are the mid-points of the sides AB and AC of  $\triangle ABC$  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

11. The figure formed by joining the mid-points of the sides of a quadrilateral ABCD, taken in order, is a square only if,
- (A) ABCD is a rhombus
  - (B) diagonals of ABCD are equal
  - (C) diagonals of ABCD are equal and perpendicular
  - (D) diagonals of ABCD are perpendicular.
12. The diagonals AC and BD of a parallelogram ABCD intersect each other at the point O. If  $\angle DAC = 32^\circ$  and  $\angle AOB = 70^\circ$ , then  $\angle DBC$  is equal to  
(A)  $24^\circ$  (B)  $86^\circ$  (C)  $38^\circ$  (D)  $32^\circ$
13. D and E are the mid-points of the sides AB and AC respectively of  $\triangle ABC$ . DE is produced to F. To prove that CF is equal and parallel to DA, we need an additional information which is
- (A)  $\angle DAE = \angle EFC$
  - (B)  $AE = EF$
  - (C)  $DE = EF$
  - (D)  $\angle ADE = \angle ECF$ .
14. Which of the following is not true for a parallelogram?
- (A) opposite sides are equal
  - (B) opposite angles are equal
  - (C) opposite angles are bisected by the diagonals
  - (D) diagonals bisect each other.