1. In a quadrilateral $ABCD, \angle A + \angle C$ is 2 times $\angle B + \angle D$. If $\angle A = 140^\circ$ and $\angle D = 60^\circ$, then $\angle B =$

   (a) 60° (b) 80° (c) 120° (d) None of these

2. If an angle of a parallelogram is two-third of its adjacent angle, the smallest angle of the parallelogram is

   (a) 108° (b) 54° (c) 72° (d) 81°

3. In a rhombus A B C D, if $\angle ACB = 40^\circ$, then $\angle ADB =$

   (a) 70° (b) 45° (c) 50° (d) 60°

4. The diagonals of a parallelogram A B C D intersect at O. If $\angle BOC = 90^\circ$ and $\angle BDC = 50^\circ$, then $\angle OAB =$

   (a) 40° (b) 50° (c) 10° (d) 90°

5. The figure formed by joining the mid-points of the adjacent sides of a rhombus is a

   (a) square (b) rectangle (c) trapezium (d) none of these

6. If one angle of a parallelogram is 24° less than twice the smallest angle, then the measure of the largest angle of the parallelogram is

7. A diagonal of a rectangle is inclined to one side of the rectangle at 25°. The acute angle between the diagonals is

   (a) 55° (b) 50° (c) 40° (d) 25°

8. ABCD is a rhombus such that $\angle ACB = 40^\circ$. Then, $\angle ADB =$

   (a) 40° (b) 45° (c) 50° (d) 60°

9. The diagonals A C and B D of a parallelogram A B C D intersect each other at O such that $\angle DAC = 30^\circ$ and $\angle AOB = 70^\circ$. Then, $\angle DBC =$

   (a) 40° (b) 35° (c) 45° (d) 50°

10. If one angle of a parallelogram is 24° lesses than twice the smallest angle, then the largest angle of the parallelogram is

    (a) 68° (b) 102° (c) 112° (d) 136°

11. The bisectors of any two adjacent angles of parallelogram intersect at

    (a) 30° (b) 45° (c) 60° (d) 90°

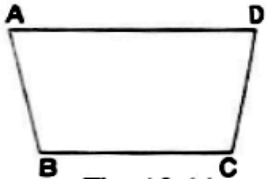
12. Three angles of a quadrilateral are $75^\circ, 90^\circ$ and 75°. The fourth angle is

    (a) 90° (b) 95° (c) 105° (d) 120°

13. In a parallelogram A B C D, if $\angle A = (2x + 25)^\circ$ and $\angle B = (3x - 5)^\circ$, then $x =$

    (a) 30° (b) 42° (c) 24° (d) 32°

14. 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

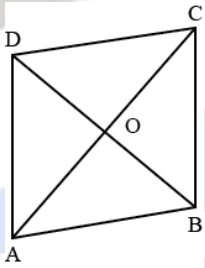


(a) rhombus (b) parallelogram (c) trapezium (d) kite

15. 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) diagonal bisects each other

16. If A P B and C Q D are two parallel lines, then the bisectors of the angles $\angle APQ, \angle BPQ$, $\angle CQP$ and $\angle PQD$ form
(a) a square
(b) a rhombus
(c) a rectangle
(d) any other parallelogram

17. In Fig. 12.9, if A B C D is a rhombus, such that $AC^2 + BD^2 = kAB^2$, then $k =$



(a) 1 (b) 2 (c) 4 (d) $\frac{3}{2}$

18. The quadrilateral formed by joining the mid-points of the pair of consecutive sides of a quadrilateral PQRS, taken in order, is a rectangle, if
(a) PQR Sis a rectangle
(b) PQR Sis a parallelogram
(c) diagonals of PQRS are perpendicular
(d) diagonals of PQRS are equal

19. The quadrilateral formed by joining the mid-points of the sides of a quadrilateral in order, is a rhombus, if
(a) PQR Sis a rhombus
(b) PQRS is a parallelogram
(c) diagonals of PQRS are perpendicular
(d) diagonals of PQRS are equal

20. If the bisectors of $\angle A$ and $\angle B$ of quadrilateral A B C D 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 P Q R S is a
(a) rectangle
(b) rhombus
(c) parallelogram
(d) quadrilateral whose opposite angles are supplementary