Remember & Understanding Based Questions

Ques.1) How many diagonals does a convex quadrilateral have?
a) 2 b) 4 c) 3 d) 5

Ques.2) What is the sum of the measures of the angles of a convex quadrilateral?
a) 90^o b) 45^o c) 180° d) 360^o

Ques.3) The sum of angles of a concave quadrilateral is
a) Equal to 360^o b) Twice of 360^o c) More than 360^o d) Less than 360^o

Ques.4) Find the number of sides of a regular polygon whose each exterior angle has a measure of 90^o .
a) 3 b) 2 c) 1 d) 4

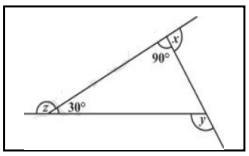
Ques.5) Which of the following is an equiangular and equilateral polygon?
a) Rhombus b) Rectangle c) Right triangle d) Square

Ques.6) Find the number of sides of a regular polygon whose each exterior angle has a measure of 40^o .
a) 6 b) 7 c) 8 d) 9

Ques.7) Which of the following can never be the measure of exterior angle of a regular polygon?
a) 30° b) 22° c) 45° d) 36°

Ques.8) Find the number of sides of a polygon whose exterior and interior angles are in the ratio 1 : 5.
a) 15 b) 14 c) 10 d) 12

Ques.9) Find x + y.



a) 90° b) 180° c) 270° d) 210°

Ques.10) A trapezium in which non - parallel sides are equal is said to be _____.
a) Scalene trapezium b) Equilateral trapezium c) Isosceles trapezium d) Right trapezium

Ques.11) Which of the following statements is incorrect:
a) Every rectangle is a parallelogram b) Every parallelogram is a quadrilateral
c) Every trapezium is a parallelogram d) Every rectangle is a parallelogram

Ques.12) Trapezium is a quadrilateral with only _____ pair of parallel sides.
a) Two b) Four c) Three d) One

Ques.13) In a kite, what is false?
1. The diagonals are perpendicular to each other
2. The diagonals bisect each other
3. Only one pair of opposite angles is equal
4. All the four sides are equal

a) Option (iii) b) Option (ii) c) Option (iv) d) Option (i)

Ques.14) In which quadrilateral only one diagonal is bisected?
a) Rectangle b) Rhombus c) Kite d) Square

Ques.15) For which of the following figures, diagonals are perpendicular to each other?
a) Trapezium b) Kite c) Parallelogram d) Rectangle

Ques.16) A quadrilateral that is not a parallelogram but has exactly two equal opposite angles is :
a) a Rhombus. b) a Trapezium c) a Square. d) a Kite.

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Ques.17) If the adjacent sides of a parallelogram are equal, then parallelogram is a
a) Rectangle b) Rhombus c) Square d) Trapezium

Ques.18) In a parallelogram∠ A : ∠ B = 1 : 2. Then, ∠ A =
a) 45^o b) 30^o c) 90^o d) 60^o

Ques.19) The _____ in a parallelogram are supplementary.
a) Adjacent sides b) Adjacent angles c) Opposite sides d) Opposite angles

Ques.20) In a parallelogram ABCD, diagonals AC and BD intersect at O. If AO = 5 cm, then AC = _____.
a) 15 cm b) 20 cm c) 10 cm d) 5 cm

Ques.21) The diagonals of which quadrilateral bisect each other at right angles?
a) Parallelogram b) Square c) Trapezium d) Kite

Ques.22) The perimeter of a rhombus is 40 cm. If one of its diagonal is 12 cm, then the length of the second diagonal is
a) 12 cm b) 15 cm c) 14 cm d) 16 cm

Ques.23) ABCD is a trapezium such that AB ‖ CD,∠ A: ∠ D = 2: 1, ∠ B = ∠ C = 7: 5. Find the angles of the trapezium.

Ques.24) Fill in the Blanks

1. The sum of the measures of angles of a convex quadrilateral is _____ degree.
2. The measure of _____ angle of the concave quadrilateral is more than 180°.
3. The name of three - sided regular polygon is _____.
4. The measure of each angle of a regular pentagon is _____ degrees.
5. The polygon in which sum of all exterior angles is equal to the sum of interior angles is called _____.
6. Maximum possible exterior angle in a regular polygon is _____ degrees.
7. In trapezium ABCD with AB || CD, if∠ A = 100°, then ∠ D = _____ degrees.
8. Diagonals of parallelogram _____ each other.
9. _____ measurements can determine a quadrilateral uniquely.
10. A quadrilateral is a parallelogram, if its diagonals _____ each other.

Ques.25) State True & False

1. A polygon in which each angle is less than 180° is called a convex polygon.
2. A polygon is regular, if all of its sides are equal.
3. The interior angles of a triangle are in the ratio 1 : 2 : 3 , then the ratio of its exterior angles is 3 : 2 : 1.
4. If the sum of interior angles is double the sum of exterior angles taken in an order of a polygon, then it is a hexagon.
5. Every trapezium is a rectangle.
6. Every trapezium is a parallelogram.
7. Each parallelogram is a trapezium.
8. Every kite is a trapezium.
9. All kites are rhombuses.

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10. Adjacent angles of parallelogram are supplementary.
11. If opposite angles of a quadrilateral are equal, it must be a parallelogram.
12. A quadrilateral can be constructed uniquely if three angles and any two included sides are given.
13. If diagonals of a quadrilateral bisect each other, it must be a parallelogram.
14. All rhombuses are squares.
15. All rhombuses are parallelograms.

Analytical Based Questions

Ques.1) Assertion (A): The angle sum of a convex polygon with a number of sides n is (n - 2) 180°.
Reason (R): A convex polygon is a polygon that is the boundary of a convex set.
a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false. d) A is false but R is true.

Ques.2) Assertion (A): Regular octagon is a regular polygon of 6 sides.
Reason (R): A polygon that is equiangular and equilateral.
a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false. d) A is false but R is true.

Ques.3) Assertion (A): Each square is a parallelogram.
Reason (R): Each parallelogram is a square.
a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false. d) A is false but R is true.

Ques.4) Assertion (A): Out of the three equal angles of a quadrilateral, each measures 70°. The measure of the fourth angle is 150.
Reason (R): In geometry a quadrilateral is a four - sided polygon, having four edges (sides) and four corners (vertices).
a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false. d) A is false but R is true.

Ques.5) Assertion (A): The diagonals of a square bisect each other at right angles.
Reason (R): The diagonals of a square do not divide the whole square into four equal parts.
a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false. d) A is false but R is true.

Ques.6) Assertion (A): All the parallelograms are rhombuses.
Reason (R): All the squares are rhombuses.
a) Both A and R are true and R is the correct explanation of A.
b) Both A and R are true but R is not the correct explanation of A.
c) A is true but R is false. d) A is false but R is true.

Ques.7) Match the following and choose the correct option.

a. Two pairs of parallel sides	i. Rectangle
b. Parallelogram with 4 right angles	ii. Square
c. Parallelogram with 4 sides of equal length	iii. Rhombus
d. A rhombus with 4 right angles	iv. Paralleogram

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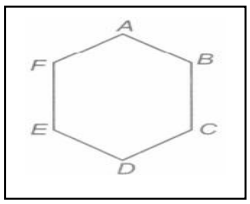
a) (a) - (iv), (b) - (i), (c) - (iii), (d) - (ii) b) (a) - (iv), (b) - (iii), (c) - (ii), (d) - (i)
c) (a) - (ii), (b) - (iv), (c) - (i), (d) - (iii) d) (a) - (i), (b) - (ii), (c) - (iii), (d) - (iv)

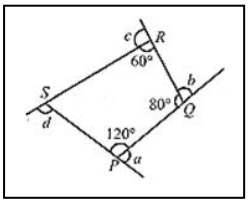
Ques.8) Two adjacent angles of a parallelogram are $(2x + 25)^o$ and $(3x - 5)^o$. The value of x is
a) 36 b) 42 c) 32 d) 28

Ques.9) The given polygon ABCDEF is _____.



a) Concave b) Convex c) Hexagon d) Both Hexagon and Convex

Ques.10) In the given figure, find a + b + c + d.



a) 100^o b) 180^o c) 210^o d) 360^o

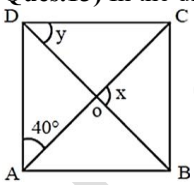
Ques.11) ABCD is a quadrilateral. AB = BC = CD = DA and $\angle A = \angle B = \angle C = \angle D = 90^o$. Then ABCD can be called
a) Rhombus b) Square c) Parallelogram d) All of these

Ques.12) Which of the following statement (s) is/are true?

1. A parallelogram in which two adjacent angles are equal is a rectangle.
2. A quadrilateral in which both pairs of opposite angles are equal is parallelogram.
3. In a parallelogram the number of acute angles is zero (or) two
4. All the above

a) Option (i) b) Option (iii) c) Option (ii) d) Option (iv)

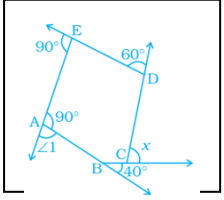
Ques.13) In the diagram, ABCD is a rhombus.



The value of x - y is:
a) 20° b) 50° c) 30^o d) 40^o

Ques.14) Which of the following is not true for an exterior angle of a regular polygon with n sides?
a) Exterior angle = 180 ° - Interior angle b) $n = \frac{360^\circ}{Exteriorangle}$ c) Each exterior angle $= \frac{(n-2)\times 180^\circ}{n}$
d) Each exterior angle $= \frac{360^\circ}{n}$

Ques.15) Find x in the following figure.



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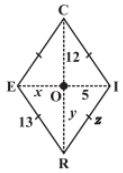
Ques.16) In a quadrilateral PQRS, $\angle P = 50^{\circ}$, $\angle Q = 50^{\circ}$, $\angle R = 60^{\circ}$. Find $\angle S$. Is this quadrilateral convex or concave?

Ques.17) Find the measure of each angle of a regular octagon.

Ques.18) RICE is a rhombus. Find y. Justify your findings.



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