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CBT QUESTION PEPER
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SUBJECT –MATHS
TOPIC - QUADRILATERALS

Q.1 The angles of a quadrilateral are in the ratio 4: 5: 10: 11. The angles are:
a. 36°, 60°, 108°, 156°
b. 48°, 60°, 120°, 132°
c. 52°, 60°, 122°, 126°
d. 60°, 60°, 120°, 120°

Answer: b

Explanation: Let x be the common angle among all the four angles of a quadrilateral.
As per angle sum property, we know:
4x+5x+10x+11x = 360°
30x = 360°
x = 12°
Hence, angles are
4x = 4 (12) = 48°
5x = 5 (12) = 60°
10x = 10 (12) = 120°
11x = 11 (12) = 132°

Q.2 Each Angle of the Rectangle is:
a. More than 90°
b. Less than 90°
c. Equal to 90°
d. Equal to 45°

Ans: c

Explanation: ABCD is a Rectangle, and ∠A equals 90°
AD || BC and AB is a transversal
∠ A + ∠ B equals 180° (Interior angles are on the same side of the transversal)
∠ A = 90°
So, ∠ B equals 180° – ∠ A equals 180° – 90° equals 90°
Now, ∠ C = ∠ A and ∠ D = ∠ B (Opposite angles of the Parallelogram)
So, ∠ C equals 90° and ∠ D equals 90°
Hence all angle is equal to 90°.

Q.3 A Trapezium has:
a. One pair of the opposite sides is parallel
b. NO pair of the opposite sides are parallel to each other
c. All of its sides are equal
d. All of the angles are equal

Ans: a

Explanation: A Trapezium has one pair of the opposite sides which are parallel to each other, and the other two sides are non-parallel.

Q.4 One of the adjacent angles in the parallelogram is 75°, the other one is

a) 75°
b) 105°
c) 15°
d) None of the above

Ans: b

- **Explanation:** Sum of adjacent angles of a parallelogram is 180^0 . If one of the angle is 75^0 then the measure of other angle is $180^0 – 75^0 = 105^0$

Q.5 ABCD is a quadrilateral. Which of these are true?

a) It has four sides
b) It has two diagonals
c) Sum of all the interior angles is 360°
d) All the above

Ans: d

° Explanation: We know that in a quadrilateral there are four sodes, two diagonals and by the angle sum property, the sum of interior angles of a Polygon is (n-2) x 180^0.Where “n” is number of sides in the Polygon. In the quadrilateral, n = 4. So sum of all interior Angles is (4-2) x 180 = 360^0

Q.6 The three angles of a quadrilateral are 76°, 54° and 108°. Find the measure of fourth angle.

a) 99°
b) 110°
c) 122°
d) None of these

Ans: c

Explanation: We know that the sum of all four interior angles of a quadrilateral is 360^0. Let measure of fourth angle is x^0

Then $76^0 + 54^0 + 108^0 + x = 360$

$238^0 + x = 360^0$

$x = 360^0 – 238^0$

$x = 122^0$

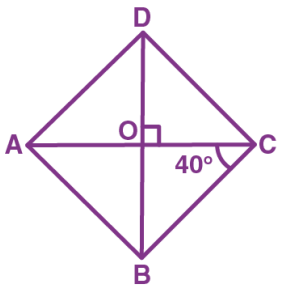
Q.7 ABCD is a rhombus such that ∠ACB = 40º. Then ∠ADB is

(a) 40º

(b) 45º

(c) 50º

(d) 60º



Answer: **c**

Explanation: We know that the diagonals of the rhombus bisect each other perpendicularly. By using the alternate interior angles, and angle sum property of triangle, we can say:
From the triangle, BOC,
∠BOC + ∠OCB + ∠OBC = 180º
(where ∠BOC= 90º, ∠OCB = 40º)
90º+40º+ ∠OBC = 180º
∠OBC = 180º – 130º
∠OBC = 50º
∠OBC =∠DBC
Now, by using alternate angles, we can say
∠ADB = 50º

Q.8 Which of the following is not true for a parallelogram?

(a) Opposite sides are equal

(b) Opposite angles are equal

(c) Opposite sides are non-parallel

(d) Diagonals bisect each other.

Answer: **c**

Explanation: Opposite sides are non-parallel is not true for a parallelogram. Whereas opposite sides are equal, opposite angles are equals, diagonals bisect each other are the properties of a parallelogram.

Q. 9 Perimeter of a parallelogram is 22 cm. If the longer side measure is 6.5 cm, the measure of shorter will be

(a) 4.5 cm

(b) 6.5 cm

(c) 2.5 cm

(d) 3.0 cm.

Answer: **a**

Explanation:We know that opposite sides of a parallelogram are equal .

Let the measure of shorter side is y cm

So $6.5 + 6.5 + y + y = 22$

$13 + 2y = 22$

$2y = 22 - 13$

$2y = 9$

$Y = 9/2$

$Y = 4.5$ cm

Q.10 If an angle of a parallelogram is two-third of its adjacent angle, the smallest angle of the parallelogram is:

(a) 81^0

(b) 54^0

(c) 108^0

(d) 72^0

Answer: **d**

Explanation : Let one of the adjacent angle is x the its adjacent angle will be $\frac{2x}{3}$

Now $x + \frac{2x}{3} = 180$

$\frac{5x}{3} = 180$

$x = 180 \times \frac{3}{5}$

$x = 108$

The smallest angle = $\frac{2x}{3}$ = $2x108/3 = 72^0$