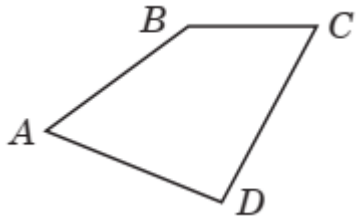
CBT EXAM-NOVEMBER-2024-25

CHAPTERS- QUADRILATERLS

CLASS-IX (MATHS)

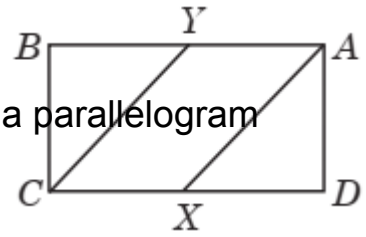
. Read the following passage and answer the questions from 1 to 5.
After summer vacation, Manit's class teacher organised a small MCQ quiz, based on the properties of quadrilaterals. During quiz, she asks different questions to
students. Some of the questions are listed below.



1. Which of the following is/are the condition(s) for ABCD to be a quadrilateral?
(A) The four points A, B, C and D must be distinct and co-planar.
(B) No three of points A, B, C and D are collinear.
(C) Line segments i.e., AB, BC, CD, DA intersect at their end points only.
(D) All of these
ANS:(D) All of these

All the conditions given in options (a), (b) and (C) are necessary for ABCD to be a quadrilateral.

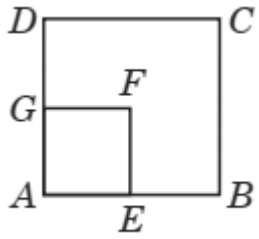
2. Which of the following is wrong condition for a quadrilateral said to be a parallelogram?
(A) Opposite sides are equal
(B) Opposite angles are equal
(C) Diagonal can't bisect each other
(D) None of these
ANS: (C) :
In a parallelogram, diagonal bisects each other.



3. If AX and CY are the bisectors of the angles A and C of a parallelogram ABCD, then
(A) AX || CY
(B) AX || CD
(C) AX || AB
(D) None of these
ANS:(A) AX || CY
$\angle A = \angle C \Rightarrow \frac{1}{2} \angle A = \frac{1}{2} \angle C$

⇒ ∠YAX = ∠YCX
Also, ∠AYC + ∠YCX = 180° [CX || AY]
∠AYC + ∠YAX = 180°
So, AX || CY (Q Interior angles on the same side of the transversal are supplementary)

4. ABCD and AEFG are two parallelograms. If ∠C = 63°, then determine ∠G.



(A) 63°
(B) 117°
(C) 90°
(D) 120°

ANS:(B) 117°
As ABCD is a parallelogram.
∠A = ∠C = 63° (Opposite angles of a parallelogram are equal)
Also, AEFG is a parallelogram.
∠A + ∠G = 180° (Adjacent angles are supplementary)
∠G = 180° – 63° = 117°

5. If angles of a quadrilateral are in ratio 3 : 5 : 5 : 7, then find all the angles.
(A) 54°, 80°, 80°, 146°
(B) 34°, 100°, 100°, 126°
(C) 54°, 90°, 90°, 126°
(D) None of these

(C) 54°, 90°, 90°, 126°
:Let the angles be 3x, 5x, 5x and 7x.
Now, 3x + 5x + 5x + 7x = 360°
⇒ 20x = 360° ⇒ x = 18°
All angles are 54°, 90°, 90°, 126°

Q.6.Assertion (A) : Two opposite angles of a parallelogram are (3x – 2)° and (50 – x)°. The measure of one of the angle is 37°.
Reason (R): Opposite angles of a parallelogram are equal.

(a) Assertion and Reason both are correct statements and Reason is the correct explanation of Assertion.
(b) Assertion and Reason both are correct statements but Reason is not the correct explanation of Assertion.
(c) Assertion is correct statement but Reason is wrong statement.
(d) Assertion is wrong statement but Reason is correct statement.

ANS: (a) : Since, opposite angles of a parallelogram are equal. Therefore, $3x – 2 = 50 – x \Rightarrow x = 13$.
So, angles are $(3 \times 13 – 2)° = 37°$ and $(50 – 13)° = 37°$

Q.7 Assertion: ABCD is a quadrilateral in which P, Q, R and S are the mid - points of AB, BC, CD and DA respectively. Then, PQRS is a parallelogram.

Reason: The line segment joining the mid - points of any two sides of a triangle is parallel to the third side and equal to half of it.

Which of the following is correct?

(a) Assertion and Reason both are correct statements and Reason is the correct explanation of Assertion.
(b) Assertion and Reason both are correct statements but Reason is not the correct explanation of Assertion.
(c) Assertion is correct statement but Reason is wrong statement.
(d) Assertion is wrong statement but Reason is correct statement.

ANS: correct option is (a)
Clearly, reason (R) and assertion (A) are both true and reason (R) gives assertion (A).The correct answer is (a).

8. One of the angles of a quadrilateral is 90° and the remaining three angles are in the ratio 2 : 3 : 4. Find the largest angle of the quadrilateral.
(A) 120°
(B) 90°
(C) 140°
(D) 100°
ANS: (A) 120°
Let the quadrilateral be ABCD in which
$\angle A = 90°$, $\angle B = 2x$, $\angle C = 3x$ and $\angle D = 4x$.
Then, $\angle A + \angle B + \angle C + \angle D = 360°$
$\Rightarrow 90° + 2x + 3x + 4x = 360°$
$\Rightarrow 9x = 270° \Rightarrow x = 30°$
$\angle B = 60°$, $\angle C = 90°$, $\angle D = 120°$
Hence, the largest angle is 120°
9. If only one pair of opposite sides of a quadrilateral are parallel, then the quadrilateral is a
(A) Parallelogram
(B) Trapezium

(C) Rhombus
(D) Rectangle
(B) Trapezium
In a trapezium, only one pair of opposite sides are parallel
10. The angle between the diagonals of a rhombus is
(A) 45°
(B) 90°
(C) 30°
(D) 60°
ANS: b) 90°
Diagonals of a rhombus are perpendicular to each other. So, the angle between them is 90°