

CBSE Class 10 2025 Mathematics Compartment Question Paper

Time Allowed :3 hours

Maximum Marks :80

Total questions :38

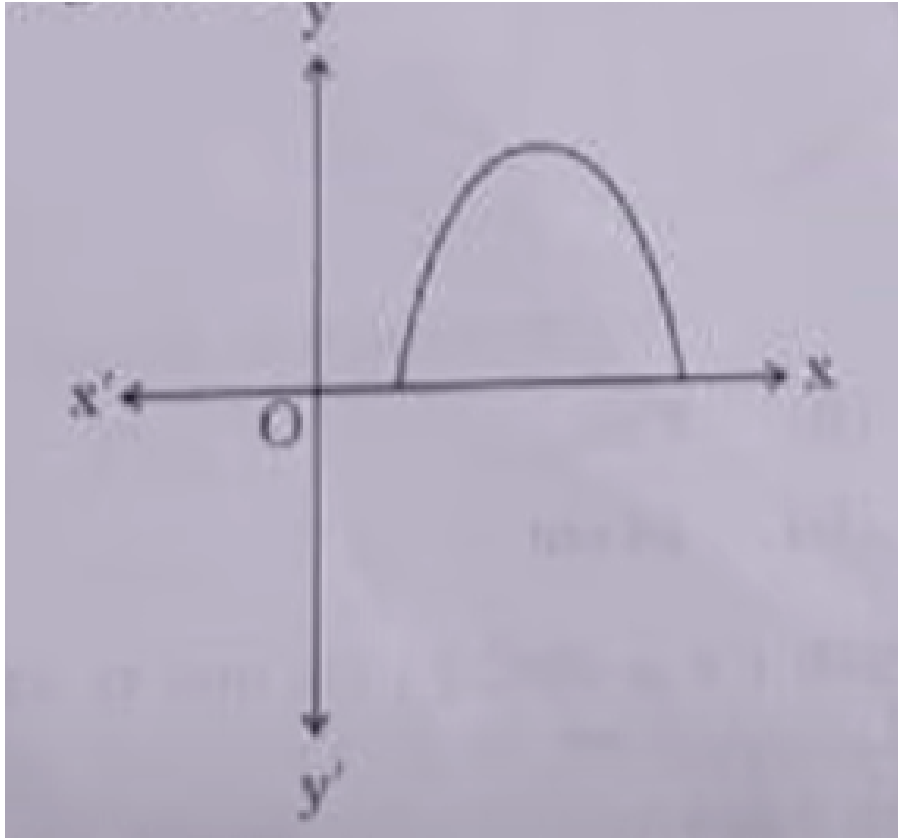
General Instructions

Read the following instructions very carefully and strictly follow them:

1. This question paper contains 38 questions. All questions are compulsory.
2. This question paper is divided into five Sections – A, B, C, D and E.
3. In Section A, Questions no. 1 to 18 are multiple choice questions (MCQs) and questions number 19 and 20 are Assertion-Reason based questions of 1 mark each.
4. In Section B, Questions no. 21 to 25 are very short answer (VSA) type questions, carrying 2 marks each.
5. In Section C, Questions no. 26 to 31 are short answer (SA) type questions, carrying 3 marks each.
6. In Section D, Questions no. 32 to 35 are long answer (LA) type questions carrying 5 marks each.
7. In Section E, Questions no. 36 to 38 are case study based questions carrying 4 marks each.
8. There is no overall choice. However, an internal choice has been provided in 2 questions in Section B, 3 questions in Section C, 2 questions in Section D and 2 questions in Section E.
9. Use of calculators is not allowed.

SECTION-A

1. If the given figure shows the graph of polynomial $y = ax^2 + bx + c$, then:



- (A) $a < 0$
 - (B) $b^2 < 4ac$
 - (C) $c > 0$
 - (D) a and b are of same sign
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2. The total number of factors of the square of a prime number is:

- (A) 1
 - (B) 2
 - (C) 3
 - (D) 4
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3. The value of k for which the pair of linear equations

$(k + 1)x + 2y = 15$, $4y = 3x - 8$ has no solution, is:

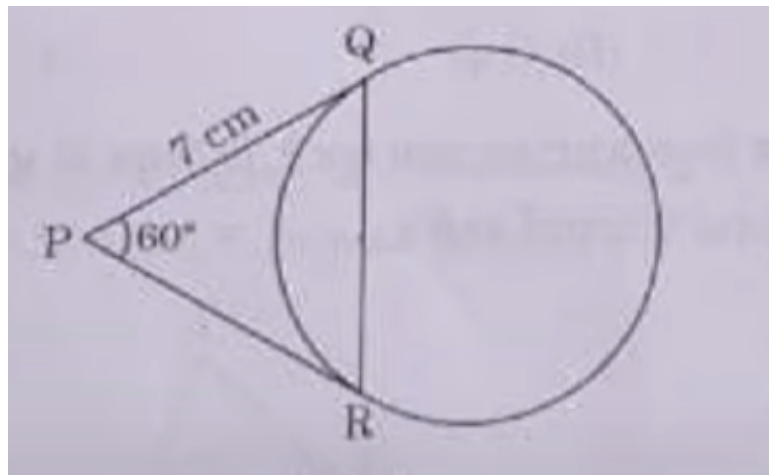
- (A) 3

- (B) $\frac{1}{5}$
(C) 5
(D) $\frac{37}{8}$
-

4. The 6th term of the AP $\sqrt{27}, \sqrt{75}, \sqrt{147}, \dots$ is:

- (A) $\sqrt{243}$
(B) $\sqrt{363}$
(C) $\sqrt{300}$
(D) $\sqrt{507}$
-

5. In the given figure, PQ and PR are tangents to the circle such that $PQ = 7$ cm and $\angle RPQ = 60^\circ$.



The length of chord QR is:

- (A) 5 cm
(B) 7 cm
(C) 9 cm
(D) 14 cm
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6. Raina is 1.5 m tall. At an instant, his shadow is 1.8 m long. At the same instant, the shadow of a pole is 9 m long. How tall is the pole?

- (A) 6.5 m
(B) 7.5 m

(C) 8.5 m

(D) 6.2 m

7. Cards numbered 10, 11, 12, ..., 30 are kept in a box and shuffled thoroughly. Rahit draws a card at random from the box. The probability that the number on the card is a multiple of 6 or 5 is:

(A) $\frac{9}{20}$

(B) $\frac{9}{21}$

(C) $\frac{10}{20}$

(D) $\frac{10}{21}$

8. M is a point on y-axis at a distance of 4 units from x-axis and it lies below the x-axis.

The distance of point M from point Q(3, 1) is:

(A) $\sqrt{2}$ units

(B) $\sqrt{24}$ units

(C) $\sqrt{50}$ units

(D) $\sqrt{60}$ units

9. If $x = p \cos^3 \alpha$ and $y = q \sin^3 \alpha$, then the value of

$\left(\frac{x}{p}\right)^{2/3} + \left(\frac{y}{q}\right)^{2/3}$ is:

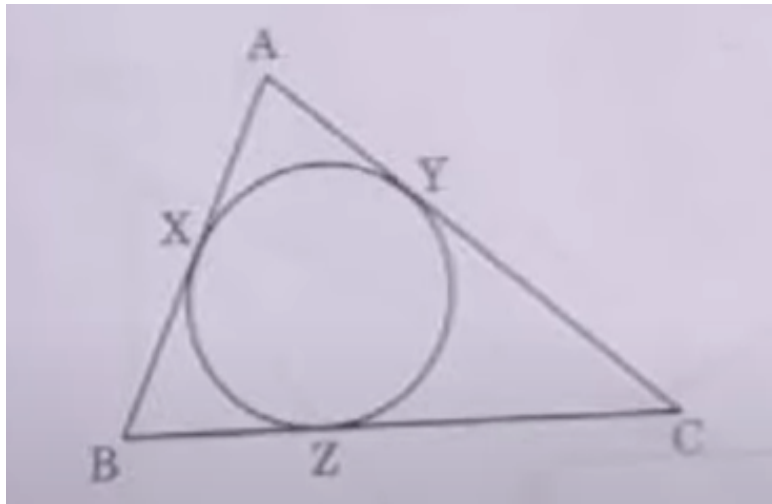
(A) 1

(B) 2

(C) p

(D) q

10. In the given figure, a circle inscribed in $\triangle ABC$ touches AB , BC , and CA at X , Z , and Y respectively.



If $AB = 12$ cm, $AY = 8$ cm, and $CY = 6$ cm, then the length of BC is:

- (A) 14 cm
 - (B) 12 cm
 - (C) 10 cm
 - (D) 8 cm
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