



ANGEL'S PUBLIC SCHOOL

SAMPLE PAPER

PERIODIC TEST – I SESSION 2025 – 26

CLASS – X

TIME : 1 hr. : 30 min.

SUBJECT – MATHEMATICS

M.M = 40

General Instructions:

- (a) Section – A comprises 5 questions of 1 mark each.
- (b) Section – B comprises 4 questions of 2 marks each.
- (c) Section – C comprises 4 questions of 3 marks each.
- (d) Section – D comprises 2 questions of 5 marks each.
- (e) Section – E comprises 1 case based questions of 5 marks.

SECTION – A

1. If two positive integers a and b are written as $a = x^5y^2$ and $b = x^2y^3$, where x and y are prime then the HCF (a,b) is ____.
(a) xy (b) x^5y^3 (c) x^3y^3 (d) x^2y^2
2. How many zeroes can a polynomial of degree n have?
(a) n+1 (b) n (c) n-1 (d) n^2
3. The zeroes of the quadratic polynomial $2x^2 - 3x - 9$ are
(a) 3, -3/2 (b) -3, -3/2 (c) -3, 3/2 (d) 3, 3/2
4. If HCF of 9 and 117 is 13, then LCM is ____.
(a) 819 (b) 130 (c) 117 (d) 273
5. The distance of point P(10,12) from origin is
(a) 22 (b) 2 (c) $2\sqrt{61}$ (d) $\sqrt{44}$

SECTION – B

6. Check whether 8 can end with the digit 0 for any natural number n.
7. Find a quadratic polynomial, the sum and product of whose zeroes are 3 and 2 respectively.
8. Find the distance between the points (2,3) and (4, 8).
9. Find the LCM and HCF of 6, 72 and 120 using prime factorisation method.

SECTION – C

10. Prove that $\sqrt{2}$ is an irrational number.
11. If α, β are the roots of a Polynomial $x^2 - 4\sqrt{3}x + 3$, then find the value of $\alpha + \beta - 3\alpha\beta$.
12. What is the greatest Possible speed at which a girl can walk 95 m/min 171 m/min in an exact number of minutes?
13. Find a relation between x and y such that the points (x,y) is equidistant from the points (7,1) and (3,5).

SECTION – D

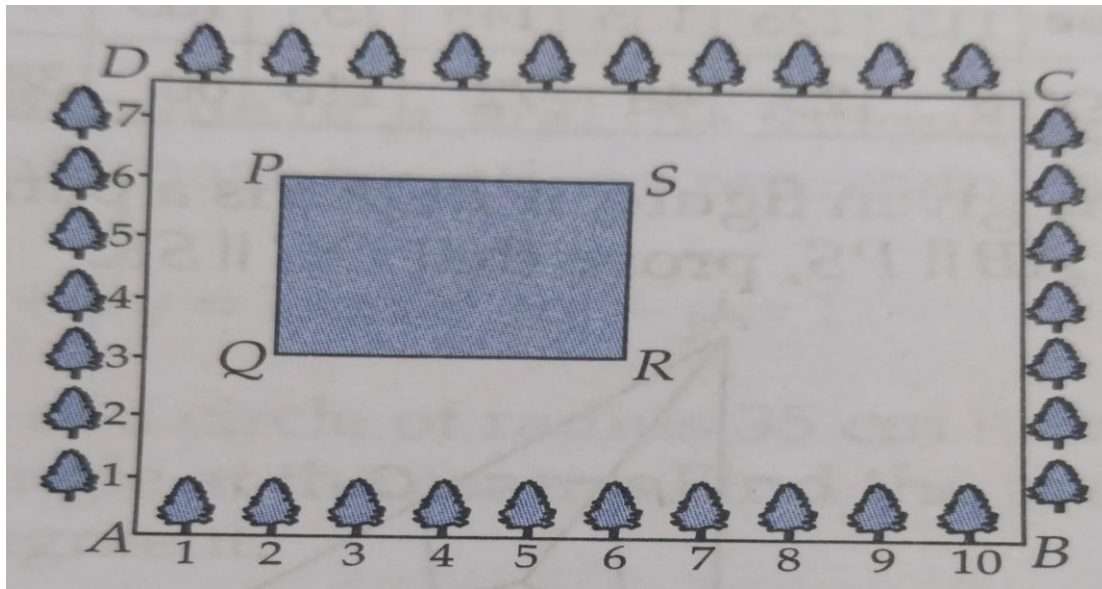
14. Find the coordinates of the points of trisection of the line segment joining the points A (2,-2) and B (-7,4).
15. Show that $7 - \sqrt{3}$ is irrational.

OR

Find a quadratic polynomial whose zeroes are reciprocals of the zeroes of the polynomial $f(x) = ax^2 + bx + c$.

SECTION – E

16. The class 10 students of a secondary school in krishnaagar have been allotted a rectangular plot of land for this gardening activity Sapling of Gulmohar are planted on the boundary at a distance of 1 m from each other.



There is a rectangular grassy lawn in the plot as shown in the figure. The students sowing seeds of flowering plants on the remaining area of the plot.

Based on the above information, answer the following questions.

- (a) Find the coordinates of point Q And S. (1)
- (b) If the point M divides the line QS in the ratio 3:2, then the coordinates of M.

OR

- If the point G divides the line QR in the ratio 1:2, then the coordinates of G. (2)
- (c) Find the distance between the vertices of diagonal Q and S. (2)