Summer Fields School

KAILASH COLONY, NEW DELHI-110048

PERIODIC TEST-2 (2025–26)

CLASS : IX
SUBJECT: MATHS

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IX - D
Roll no - 19

TIME : 1 Hr.
M.M. = 30

INSTRUCTIONS:
1. This question paper contains 14 questions.
2. Q1 to Q5 (1 markers), Q6 to Q9 (2 markers), Q10 to Q13 (3 markers), Q14 (5 marker)
3. All the questions are compulsory.

Q1. Find the degree and the constant term of the polynomial : $27x^3 + 4x^4 + 0x^5 + 5x + 7$.

Q2. Based on Euclid's postulate, how many line(s) can pass through 3 collinear points ?

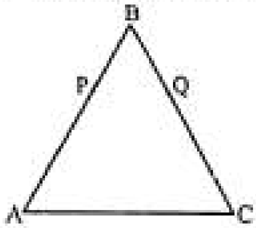
Q3. Euclid collected all known work in the field of mathematics in his famous treatise. Name the Treatise and mention the number of chapters in it.

Q4. Axioms are assumed to be Universal truths in all branches of mathematics. (True/False).

Q5. Euclid stated that " All right angles are equal to each other" in the form of.(MCQ)
a. an axiom b. a definition c. a postulate d. a proof

Q6. Find the remainder when $x^3 - ax^2 + 6x - a$ is divided by $x - a$.

Q7. In the given figure, AB = BC, BP = BQ. Show that AP = CQ. State Euclid's axiom used.



Q8. Find possible length and breadth of the rectangle whose area is given by $6a^2 + 17a + 5$.

Q9. If x+y =10 and x=z then show that z+y = 10. State the axiom used here.

Q10. If a+b+c = 9 and ab+bc+ca = 26, then find the value of $a^2+b^2+c^2$.

Q11. Divide the polynomial $p(x) = 2x^4 + 3x^3 - 2x^2 - 9x - 2$ by $g(x) = x^2 - 3$ and find what should be subtracted from p(x) so that it becomes divisible by g(x).

Q12. Factorise : $27p^3 - \frac{1}{216} - \frac{9}{2}p^2 + \frac{1}{4}p$ by using proper Identity.

Q13. If $(3x - 4)(5x + 7) = 15x^2 - kx - 28$, then find the value of k.

Q14. If both x – 2 and 2x – 1 are factors of $px^2 + 5x + r$, show that p = r.