

KENDRIYA VIDYALAYA SITAPUR
PERIODIC TEST – 1
MATHEMATICS – IX, SESSION: 2017 – 18

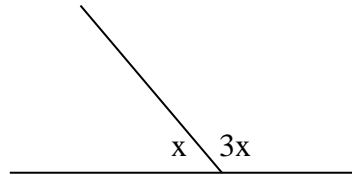
Max. Marks: 40

Time: 1 Hr and a Half

Note: There are four sections in this Question paper. Section A, B, C and D. Section A contains 4 Questions of 1 mark each, Section B contains 4 Questions of 2 marks each, Section C contains 4 Questions of 3 marks each and Section D contains 4 Questions of 4 marks each.

SEC –A

1. Find the value of k in $p(x)=x^2 + x +k$ if $x - 1$ is a factor of $p(x)$.
2. Find a rational number between $\frac{1}{4}$ and $\frac{3}{4}$.
3. Find the value of k, if $x = 2, y = 1$ is a solution of the equation $2x + 3y = k$.
4. Find x in given figure.

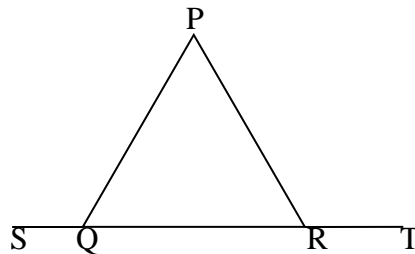


SEC –B

5. $x = 9 - 4\sqrt{5}$ find $\frac{1}{x}$.
6. Find the remainder obtained on dividing $p(x) = x^3 + 1$ by $x + 1$.
7. Write the answer of each of the following questions:
 - (i) What is the name of horizontal and the vertical lines drawn to determine the position of any point in the Cartesian plane?
 - (ii) What is the name of each part of the plane formed by these two lines?
8. How would you rewrite Euclid's fifth postulate so that it would be easier to understand?

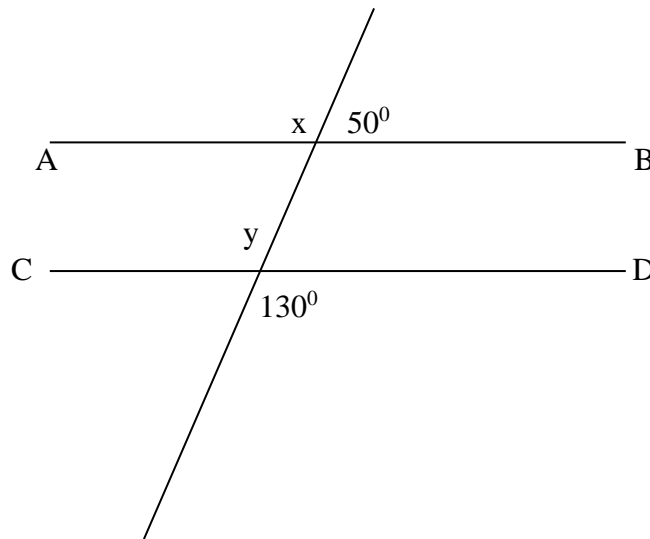
SEC –C

9. Simplify $\frac{3}{5-\sqrt{3}} - \frac{2}{5+\sqrt{3}}$.
10. Give the geometric representation of $2x + 9 = 0$ as an equation
 - (i) in one variable
 - (ii) in two variables
11. If a point C lies between two points A and B such that $AC = BC$, then prove that $AC = \frac{1}{2}AB$ (by using Euclid's axiom) . Explain by drawing the figure.
12. In given Fig., $\angle PQR = \angle PRQ$, then prove that $\angle PQS = \angle PRT$.



SEC -D

13. Factorise $x^3 - 23x^2 + 142x - 120$.
14. Plot the following points on a graph sheet
A(5,6) , B(-4,0) , C(-2,-3), D(2,-4)
15. The taxi fare in a city is as follows: For the first kilometre, the fare is Rs. 8 and for the subsequent distance it is Rs.5 per km. Taking the distance covered as x km and total fare as Rs y , write a linear equation for this information, and draw its graph.
16. Find the values of x and y and then show that $AB \parallel CD$.



KENDRIYA VIDYALAYA SITAPUR (I Shift)
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Name of the Chapter	V.S.A. 1 Mark	S.A. I 2 Mark	S.A. II 3 Mark	L.A. 4 Mark	Total 40
Number System	1(1)	1(2)	1(3)	3(6)
Polynomials	1(1)	1(2)	1(4)	3(7)
Coordinate Geometry		1(2)	1(4)	2(6)
Linear Equation in two variables	1(1)	1(3)	1(4)	3(8)
Introduction to Euclid's Geometry	1(2)	1(3)	2(5)
Lines and Angles	1(1)	1(3)	1(4)	3(8)
Total	4(4)	4(8)	4(12)	4(16)	16(40)