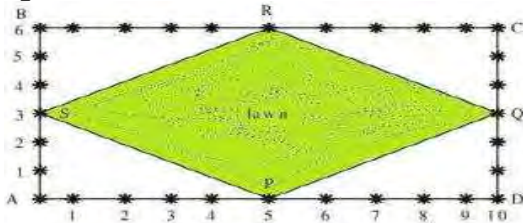


KENDRIYA VIDYALAYA SITAPUR FIRST SHIFT
PERIODIC TEST-2
CLASS-IX (MATHS) 2023-24

M.M:-40

TIME:-90 MIN

SECTION-A		MKS
Q.1	The rational number between $\frac{1}{2}$ and $\frac{1}{3}$ is (a) $\frac{2}{5}$ (b) $\frac{1}{5}$ (c) $\frac{3}{5}$ (d) $\frac{4}{5}$	1
Q.2	The value of 0.423 is (a) $\frac{423}{1000}$ (b) $\frac{423}{100}$ (c) $\frac{423}{990}$ (d) $\frac{419}{990}$	1
Q.3	If $a+b+c = 0$, then $a^3 + b^3 + c^3 =$ (a) abc (b) $3abc$ (c) $2abc$ (d) $-3abc$	1
Q.4	If $x = -2$ and $x^2 + y^2 + 3xy = -5$, then find y (a) -2 (b) 3 (c) -4 (d) 9	1
Q.5	Point $(-2, 3)$ lies in the (a) first quadrant (b) second quadrant (c) third quadrant (d) fourth quadrant	1
Q.6	Which of the following equation has graph parallel to y -axis? (a) $y = -2$ (b) $x = 1$ (c) $x - y = 2$ (d) $x + y = 2$	1
Q.7	Axioms are assumed: (a) universal truths in all branches of mathematics (b) theorems (c) definitions (d) universal truth specific to geometry	1
Q.8	If one angle of triangle is equal to the sum of the other two then triangle is (a) acute a triangle (b) obtuse triangle (c) right triangle (d) None of these	1
Q.9	An angle is 18° less than its complementary angle. The measure of this angle is (a) 36° (b) 48° (c) 83° (d) 81°	1
Q.10	If two sides of a triangle are unequal then opposite angle of larger side is (a) greater (b) less (c) equal (d) half	1
Q.11	The two diagonals are equal in a (a) parallelogram (b) rhombus (c) rectangle (d) trapezium	1
Q.12	Two adjacent angles of a parallelogram are $(2x + 25)^\circ$ and $(3x - 5)^\circ$. The value of x is (a) 28° (b) 32° (c) 36° (d) 42°	1
SECTION- B		
Q.13	The Class IX students of a secondary school in Krishinagar have been allotted a rectangular plot of land for their gardening activity. Sapling of Gulmohar are planted on the boundary at a distance of 1m from each other. There is a lawn PQRS in the ground as shown in below figure. 	
(a)	What are the coordinates of C, taking A as origin? (i) $C(6, 10)$ (ii) $C(10, 10)$ (iii) $C(6, 6)$ (iv) $C(10, 6)$	1
(b)	What are the coordinates of R, taking A as origin? (i) $R(6, 5)$ (ii) $R(5, 5)$ (iii) $R(5, 6)$ (iv) $R(6, 6)$	1
(c)	Shape of lawn is : (i) Rectangle (ii) Square (iii) Parallelogram (iv) Rhombus	1
(d)	Area of lawn is :	1

	(i) 30 sq. units (iii) 45 sq. units	(ii) 60 sq. units (iv) None	
Q.14	In the given below figure. Answer the following questions		
(a)	What is the value of x ? (a) 48° (b) 96° (c) 100° (d) 120°		1
(b)	What is the value of y ? (a) 48° (b) 96° (c) 100° (d) 24°		1
(c)	What is the value of z ? (a) 48° (b) 96° (c) 42° (d) 120°		1
(d)	What should be the value of $x + 2z$? (a) 148° (b) 360° (c) 180° (d) 120°		1
SECTION-C (VSA)			
Q.15	Add $2\sqrt{2} + 5\sqrt{3}$ and $\sqrt{2} - 3\sqrt{3}$.		1
Q.16	Write the coefficients of x^2 in each of the following: (i) $2 + x^2 + x$ (ii) $2 - x^2 + x^3$		1
Q.17	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?		1
Q.18	Express the following linear equations in the form $ax + by + c = 0$ and indicate the values of a , b and c in each case: (i) $2x + 3y = 9.35$ (ii) $x - \frac{y}{5} - 10 = 0$		1
Q.19	If a point C lies between two points A and B such that $AC = BC$, then prove that $AC = \frac{1}{2} AB$. Explain by drawing the figure.		1
Q.20	Write the definition of the following (i) complementary angle (ii) adjacent angle		1
Q.21	In triangle ABC , if $AB = BC$ and $\angle B = 70^\circ$, $\angle A$ will be		1
Q.22	In a rectangle, one diagonal is inclined to one of its sides at 25° . Measure the acute angle between the two diagonals		1
SECTION-D			
Q.23	Find six rational numbers between 3 and 4.		2
Q.24	Find $p(0)$, $p(1)$ and $p(2)$ for each of the following polynomials: (i) $p(y) = y^2 - y + 1$ (ii) $p(t) = 2 + t + 2t^2 - t^3$		2
Q.25	If $PQ \parallel ST$, $\angle PQR = 110^\circ$ and $\angle RST = 130^\circ$, find $\angle QRS$.		3
Q.26	AD and BC are equal perpendiculars to a line segment AB . Show that CD bisects AB .		2
Q.27	Show that the diagonals of a rhombus are perpendicular to each other.		3