Greenfields Public School

Dilshad Garden, GTB Enclave, Delhi-110093.
Tel; 22584740, 22118756. Email. Info @ greenfieldspublicschool.com

SUMMER VACATIONS HOME-WORK Class: IX (2026-27)

Subject: Mathematics

1. Solve all the questions of the given
ASSIGNMENTS in Assignment Register.

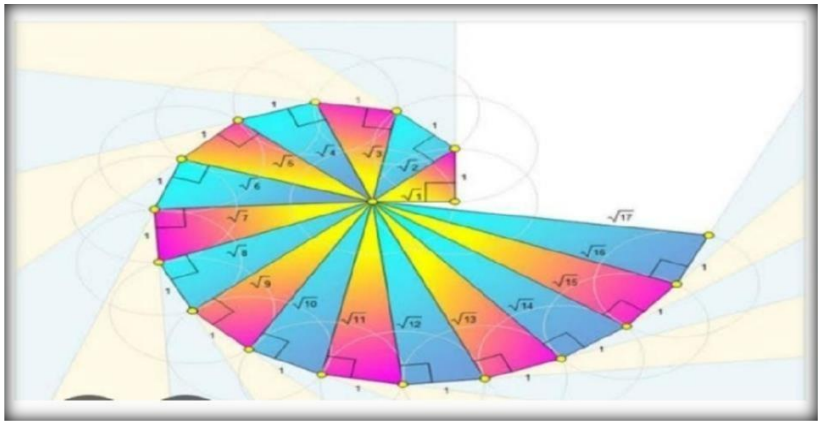
➢ Assignment 1, Chapter: Coordinate Geometry
➢ Assignment 2, Chapter: The World of Numbers
➢ Assignment 3, Chapter: Introduction to Linear Polynomial

2. Prepare & Revise given Chapters from NCERT book and do the practice of all NCERT examples thoroughly.
➢ Chapter 1: Coordinate Geometry
➢ Chapter 2: Introduction to Linear Polynomials
➢ Chapter 3: The world of Numbers

3. **Subject Enrichment Activities:**

Chapter 3 : The world of Numbers

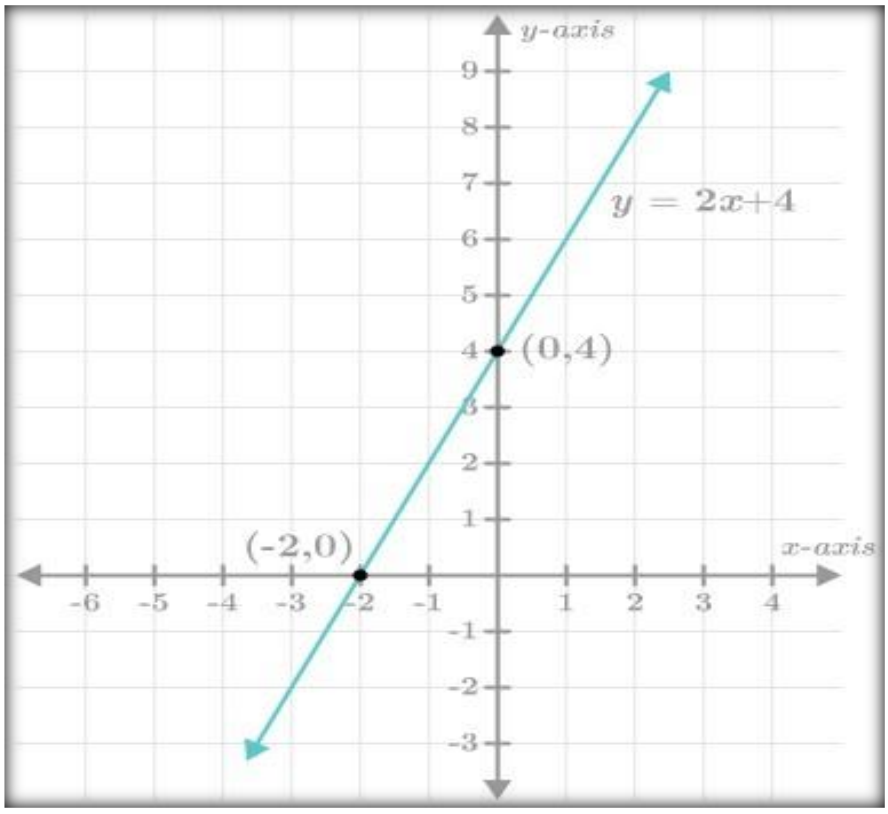
Activity 1- To construct a square root spiral by an activity.



Chapter 2: Introduction to Linear polynomials

Activity 2- To obtain a linear equation and draw a graph to represent the equation.

Note: These activities are to be done in your math's activity file with creativity, and these activities will be assessed for ***subject enrichment.***



Greenfields Public School

Dilshad Garden, GTB Enclave, Delhi-110093.
Tel; 22584740, 22118756. Email. Info @ greenfieldspublicschool.com

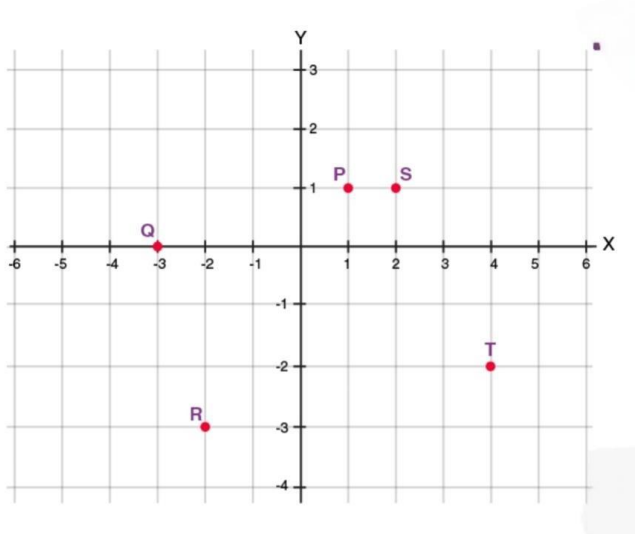
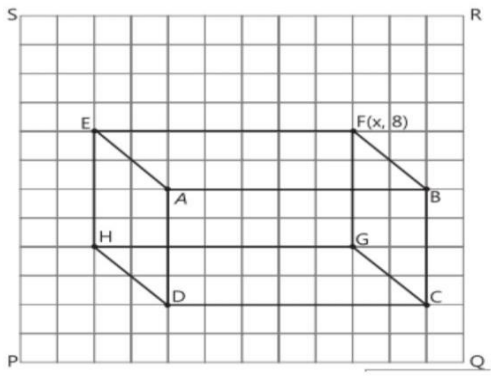
==========

COMPETENCY ASSIGNMENT

SUBJECT: Mathematics **GRADE: I X**

CHAPTER: CO-ORDINATE GEOMETRY

S.NO.	QUESTIONS	MARKS
1.	If the coordinates of a point are (0, -4), then it lies in: a. X-axis b. Y-axis c. At origin d. Between x-axis and y-axis	1
2.	If the coordinates of a point are (3, 0), then it lies in: a. X-axis b. Y-axis c. At origin d. Between x-axis and y-axis	1
3.	The points (-1, –2), (1, 0), (-1, 2), (-3, 0) form a quadrilateral of type: (a) Square (b) Rectangle (c) Parallelogram (d) Rhombus	1
4.	The midpoint of a line segment joining two points A(2, 4) and B(-2, -4) is (a) (-2, 4) (b) (2, -4) (c) (0, 0) (d) (-2, -4)	1
	Directions for Q5: In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as: a. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A). b. Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A). c. Assertion (A) is true but reason (R) is false. d. Assertion (A) is false but reason (R) is true.	
5.	**Assertion:** Point A (-2, -4) lies on III quadrant **Reason**: A point both of whose coordinates are negative lies in III quadrant	1
6.	Plot the following points and write the name of the figure obtained by joining them in order:	2

	P(– 3, 2), Q (– 7, – 3), R (6, – 3), S (2, 2)	
7.	Write the coordinates of each of the points P, Q, R, S, T and O from the figure given. 	2
8.	Find the point on the x-axis, which is equidistant from (2, –5) and (–2, 9)	3
9.	If the points A (1, –2), B (2, 3) C (a, 2) and D (– 4, –3) form a parallelogram, find the value of a and height of the parallelogram taking AB as the base.	5
10.	**Case Study Question**	4
	According to medical science and research, keeping an aquarium in the house helps in treating stress, anxiety and health problems associated with blood. It also provides visual stimulation that boost your focus and creativity. A sketch of an aquarium is drawn, which is given in the following figure.  I. Find the coordinates of H and G Ii. Find the length of HG III. If P is considered as origin, then find the coordinates of mid-point of BC. OR IV. Find the length of diagonal FD and the value of x.	

	HOTS	
11.	The centre of a circle is (2a, a – 7). Find the values of a, if the circle passes through the point (11, –9) and has a diameter $10\sqrt{2}$ units.	2
12.	If the distances of P (x, y) from A (5, 1) and B (-1, 5) are equal, then prove that 3x = 2y.	3
13.	Find the area of a rhombus if its vertices are (3, 0), (4, 5), (– 1, 4) and (– 2, – 1) taken in order. [Hint: Area of a rhombus = 1/2 (product of its diagonals)]	5

Greenfields Public School

Dilshad Garden, GTB Enclave, Delhi-110093.
Tel; 22584740, 22118756. Email. Info @ greenfieldspublicschool.com

COMPETENCY ASSIGNMENT

SUBJECT: Mathematics **GRADE: I X**

CHAPTER: The World of Numbers

S.NO.	QUESTIONS	MARKS
1.	The three rational numbers between 3 and 4 are: a. 5/2, 6/2, 7/2 b. 13/4, 14/4, 15/4 c. 12/7, 13/7, 14/7 d.11/4, 12/4, 13/	1
2.	Every rational number is: a. Whole number b. Natural number c. Integer d. Real number	1
3.	The irrational number between 2 and 2.5 is a. √11 b. √5 c. √22.5 d. √12.5	1
4.	The decimal representation of the rational number is a. Always terminating b. Either terminating or repeating c. Either terminating or non-repeating d. Neither terminating nor repeating	1
	Directions for Q5: In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as: a. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A). b. Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A). c. Assertion (A) is true but reason (R) is false. d. Assertion (A) is false but reason (R) is true.	

5.	**Assertion**: 0.329 is a terminating decimal. **Reason:** A decimal in which a digit or a set of digits is repeated periodically, is called a repeating, or a recurring decimal.	1
6.	Represent √3 on number line	2
7.	Find three different irrational numbers between the rational numbers 5/7 and 9/11	2
8.	Prove that √5 is irrational number.	3
9.	Show that 2.63333333..... can be written in the p/q form. What can the maximum number of digits be in the repeating block of digits in the decimal expansion of 1/17? Perform the division to check your answer.	5
10.	**Case Study Question** In January 2021, the vaccination drive for COVID -19 started in 7 states of a country. More than 60% of the people were vaccinated in 4 states out of 7 states, In one of the state vaccination drive has not been started due to flood although vaccine dose was supplied to that state in advance. In February 2021, 4 more states were included in this drive and 2 states have got remarkable response from the people and more than 80% of the population got vaccinated there. Using this information answer the following questions: A). In January 2021, more than 60% of people were vaccinated in 4 states out of 7 states. Find the decimal representation of 4/7 (B) In 2 states out of 11 states, more than 80% of people participated in vaccination drive in two months. Find the decimal form of 2/11 (C) Find six rational numbers between 2/11 and 4/7 OR (D) Express 0.333333 in p/q form OR (D) Express 0.333333 in p/q form	4

Greenfields Public School

Dilshad Garden, GTB Enclave, Delhi-110093.
Tel; 22584740, 22118756. Email. Info @ greenfieldspublicschool.com

COMPETENCY ASSIGNMENT

SUBJECT: Mathematics **GRADE: I X**

CHAPTER: Introduction to Linear Polynomial

S.NO.	QUESTIONS	MARKS
1.	x - 2x+1 is a polynomial in: a. One Variable b. Two Variables c. Three variable d. None of the above	1
2.	1+3x is a _____ polynomial. a. Linear b. Quadratic c. Cubic d. None of the above	1
3.	The coefficient of x in $7x^2+6x-2$ is a. 2 b. 6 c. -2 d. 7	1
4.	What is the degree of the polynomial √3? a. 0 b. 1 c. 1/2 d. 2	1
	Directions for Q5: In the following questions, a statement of assertion (A) is followed by a statement of reason (R). Mark the correct choice as: a. Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A). b. Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A). c. Assertion (A) is true but reason (R) is false. d. Assertion (A) is false but reason (R) is true.	

5.	Assertion : The degree of the polynomial$(x - 2)(x - 3)(x + 4)$ is 3. Reason : A polynomial of degree 3 is called a cubic polynomial.	1
6.	The sum of two numbers is 25. One number is 9 more than the other. Find the numbers.	2
7.	Write a two polynomials of degree 3 in the variable x, in which the coefficient of the x term is -7	2
8.	Cricket club charges a joining fee of `2000 plus `500 for every match played. (I)Find the amount paid after 7 match. (ii) Make a table of values for 'm' varying from 0 to 10 match and show how the amount 'a', increases every match. (iii) Find an expression that relates a and m, and explain why it represents linear growth.	3
9.	Draw the graph of the following equations and identify their slopes and y intercepts. Also, find the coordinates of the points where these lines cut the y-axis. (i) $y = -3x + 4$ (ii) $2y = 4x + 7$ (iii) $5y = 6x - 10$ (iv) $3y = 6x - 11$ Are any of the lines parallel?	5
10.	**Case Study Question** A father is 4 times as old as his son. After 10years, he will be 3 times as old. (I) Find the equation in one variable (II) Write the degree of equation (III) Find the age of Father and Son OR (IV)Plot the graph for $x + y = 10$	4