પુના International School
Shree Swaminarayan Gurukul, Zundal

Examination P A 1 2021 – 22					
Student Name				**Grade** 9^{th}	
Date				**Subject**	**MATHEMATICS**
		Time		**Total Marks**	**50**

Choose correct options **[1X8 = 8]**

1 The absolute value of | - 23 | is

(A) - 23 (B) 23 (C) 0 (D) None

2 The smallest prime number is

(A) 0 (B) 2 (C) 1 (D) None

3 Any point on the X axis is of the form

(A) (x, y) (B) (x, 0) (C) (0,y) (D) (0, 0s)

4. 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

5. $\sqrt{2}$ is a polynomial of degree

(A) 2 (B) 0 (C) 1 (D) ½

6. Which of the following is quadratic polynomial?

(A) x + 2 (B) $x^2 + 2$ (C) $x^3 + 2$ (D) 2x + 2

7. The zero of the polynomial P(X) = 2x + 5 is

(A) 2/5 (B) 5/2 (C) 0 (D) -5/2

8 If (2, 0) is a solution of the linear equation 2x + 3y = k, then the value of k is

(A) 4 (B) 5 (C) 6 (D) 2

Solve: Each carry 1 mark (Any Four) **[1 X4 = 4]**

9. Every Natural number is a Whole number (T / F)

10. Is zero a rational number? Can you write it in form p/q, where q and p are integers and q ≠0?

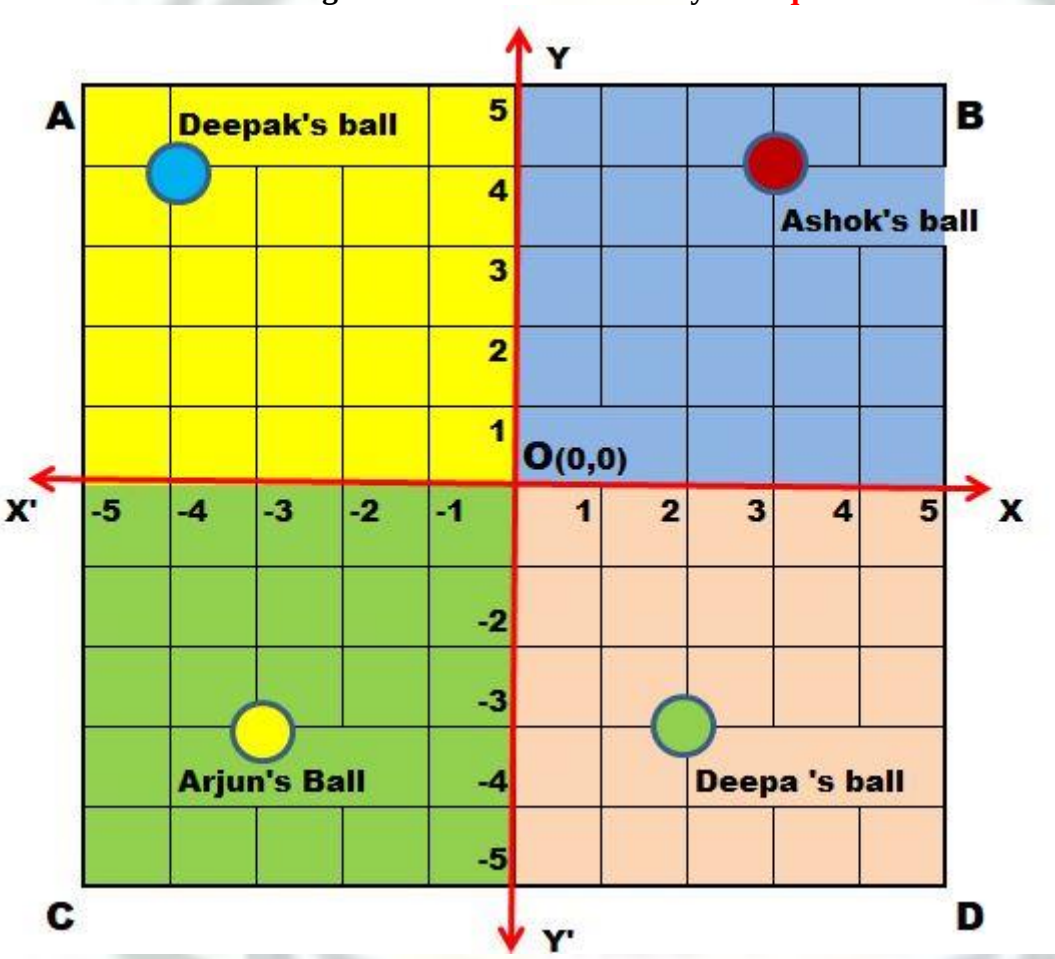
11. Give one example each of a binomial of degree35, and of a monomial of degree 100.

12. Find the value of the polynomial $5x - 4x^2 + 3$ at

(i) x = 0 (ii) x = -1

CASE STUDY

13. **Read the Source/Text given below and answer any four questions:** **[1 X 4 = 4]**



There is a square park ABCD in the middle of Saket colony in Delhi. Four children Deepak, Ashok, Arjun and Deepa went to play with their balls. The colour of the ball of Ashok, Deepak, Arjun and Deepa are red, blue, yellow and green respectively.
All four children roll their ball from centre point O in the direction of **XOY, X'OY, X'OY' and XOY'**. Their balls stopped as shown in the above image.

Answer the following questions:

i. What are the coordinates of the ball of Ashok?
   a. (4, 3)
   b. (3, 4)
   c. (4, 4)
   d. (3, 3)

ii. What are the coordinates of the ball of Deepa?

a. (2, -3)
b. (3, 2)
c. (2, 3)
d. (2, 2)

iii. What the line XOX' is called?

a. y-axis
b. ordinate
c. x-axis
d. origin

iv. What the point **O (0,0)** is called?

a. y-axis
b. ordinate
c. x-axis
d. origin

v. What is the ordinate of the ball of Arjun?

a. -3
b. 3
c. 4
d. 2

Solve: Each carry 2 marks (Any Five) **[2 X 5 = 10]**

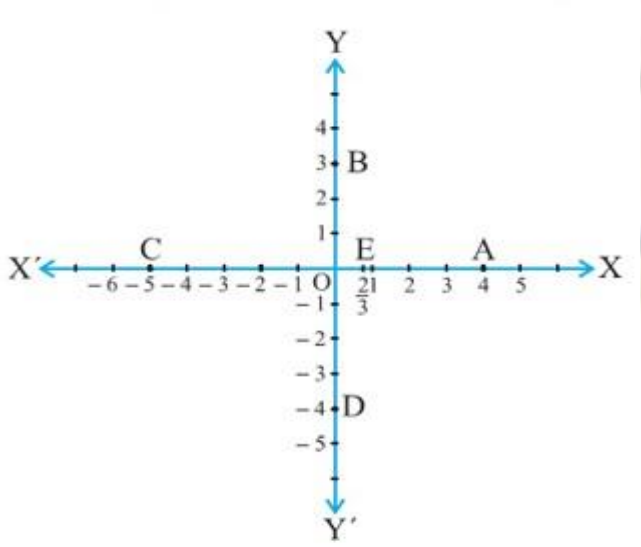
14. Find six rational numbers between 3 and 4

15. Locate $\sqrt{2}$ on the number line

16. Write four solution for $2x + y = 7$

17. Write four solution for $x - 4y = 0$

18. Write the coordinates of the points marked on the axes in given figure



19. In which quadrant will the point lie, if :

(i) The y-coordinate is 3 and the x-coordinate is –4?
(ii) The x-coordinate is –5 and the y-coordinate is –3?
(iii) The y-coordinate is 4 and the x-coordinate is 5?
(iv) The y-coordinate is 4 and the x-coordinate is –4?

Solve: Each carry 3 marks (Any Three) [3 X 3 = 9]

20. Visualize 3.765 on the number line, using successive magnification.

21. Express 3. 142678 in the form $\frac{p}{q}$

22. Divide the polynomials:-

i. $3x^4 - 4x^3 - 3x - 1$ by $x - 1$ OR $X^3 + 1$ by $x + 1$

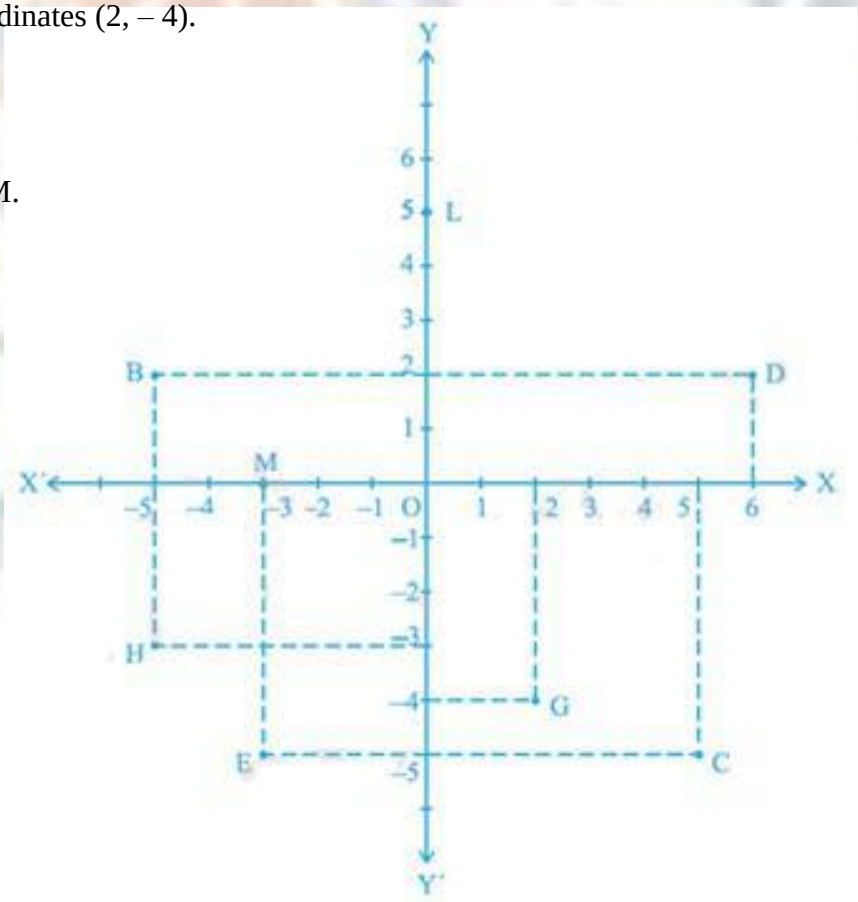
23. Factorise :

i $49a^2 + 70ab + 25b^2$ OR $25/4x^2 - y^2/9$

Solve: Each carry 5 marks [5 X 3 = 15]

24. See in below figure, and write the following:

(i) The coordinates of B.
(ii) The coordinates of C.
(iii) The point identified by the coordinates (–3, –5)
(iv) The point identified by the coordinates (2, – 4).
(v) The abscissa of the point D.
(vi) The ordinate of the point H.
(vii) The coordinates of the point L.
(viii) The coordinates of the point M.



25. TRUE OR FALSE

(i) Every integer is a rational number
(ii) Every rational number is a integer.
(iii) Every whole number is a Natural number
(iv) Every integer is a whole number
(v) Every rational number is a whole number

26. FACTORISE: (Any Two)

1. $x^2+13x+30$ 2 . $x^2+33x+260$ 3 . $x^2 + 17x +30$

BEST OF LUCK