

**PM SHRI KENDRIYA VIDYALAYA PASIGHTA**  
**SUMMER VACATION HOLIDAYS HOME WORK 2024-25**  
**CLASS X**  
**SCIENCE**

**Activity-1 : Acid and Base**

Collect at least 20 sample of different substance are used in day to day life and check whether they are acidic and basic by using turmeric powder and red onion as a natural indicator.

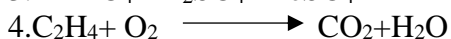
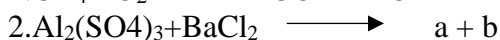
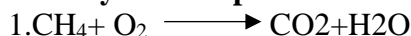
To make the onion indicator cut one onion in to pieces and soaked in water for 24 hours boil and extract the onion juice.

Example- Lemon juice ,soap solution, toilet cleaner, curd, tomato juice, eno, shaving cream sol. ,baking soda

Note your observation in the following table-

Samples	Colour with turmeric	Colour with onion extract	Nature Acidic/ Basic

**Activity 2- Complete and Balance the following equations**



**Activity 3:-** Write the in-text and exercise question answer of chapter Life Processes in your homework notebook.

**Activity 4** – Click on the link given below and do the competency based question of chapter 1 – Chemical reactions and equations and chapter 2 – Life Processes.

<https://drive.google.com/file/d/1sOuU1MLLVxf3KKhEYqlFRKZtgGnpn7Mh/view>

**Activity 5** - Explore the ideas to participate in inspire award, NCSC and Science Exhibition. Write your ideas in an A4 sheet paper.

Link for inspire award

[https://drive.google.com/file/d/1z9N\\_JfA60x6cRmMWhig89P-kxBix5x9B/view](https://drive.google.com/file/d/1z9N_JfA60x6cRmMWhig89P-kxBix5x9B/view)

link for NCSC (National level participation)

[https://docs.google.com/presentation/d/1kYNQNhSPMcHA6Bm\\_L8ymOmos-RYvA-VM/edit#slide=id.p6](https://docs.google.com/presentation/d/1kYNQNhSPMcHA6Bm_L8ymOmos-RYvA-VM/edit#slide=id.p6)

**Activity 6** - Prepare a brief report for school Magazine on "What are the changes in society from last 50 years" by discussing with your grandparents or any elder on any one of the following topics :-

1. Mode of transportation
2. Mode of communications
3. Moral values
4. Behaviour of children & elders
5. Sports and games
6. Relation with relatives
8. Practical knowledge and Discipline

**Activity 7** – Prepare Portfolio in the format provided for internal Assessment.



**PM SHRI KENDRIYA VIDYALAYA, Pasighat**

**HOLIDAY HOMEWORK FOR SUMMER VACATION**

**SUBJECT – LIBRARY**

**“Reading is the gateway skill that makes all other learning possible”**

– by Barack Obama.

CLASSES: VI- XII

1. Read the newspaper/e-newspaper daily and collect 10 new words on each Monday, search their meaning and learn them.
2. Make a habit to read daily at your convenient time and keep the record of your reading in the library notebook.
3. You can use the mobile app e-Pustakalaya, launched by Ministry of Education to read books. This app is very useful and serves as a national repository of knowledge and stories, specifically curated for children.

Link -

Android:<https://play.google.com/store/apps/details?id=national.digital.library>

4. Write about your favorite book/books in the library notebook.
5. Collect and write 10 motivational thoughts given by famous personalities.
6. Write a book review on A4 size paper.

Stay happy & Be Informed always!

Happy Holi ys!

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**PM SHRI KENDRIYA VIDYALAYA PASIGHAT**

**HOLIDAY HOME WORKS SESSION 2024-25**

**Social Science**

**Class 10**

1. Solve MONTHLY TEST paper in your homework notebook.
  2. Prepare portfolio of Social Science.
  3. Complete all the chapters ( notes and question- answer) taught before summer vacation (only for the students who have not completed their assigned work)
  4. Map Work: Distribution of Soils ( On outline Political map of India)
  5. Answer following questions:
    - A. Describe the role of culture in shaping the feelings of nationalism in Europe from 1830 to the end of 19<sup>th</sup> Century.
    - B. Analyse the measures and practices introduced by the French revolutionaries to create a sense of collective identity amongst the French people.
    - C. Why was the decade of 1830s known as great economic hardship in Europe? Explain the reasons.
    - D. “In India, some regions are rich in certain types of resources but deficient in some other resources”. Do you agree with the statement? Support your answer with examples.
    - E. Explain the contribution of Communities in conservation of forest and wildlife resources.
- 

**Holiday Homework (SST)**

**Class 8**

1. Complete Learner’s Diary for topics completed so far.
  2. Learn question and answer of all topics completed before summer vacation
  3. Complete all the chapters (notes and question- answers) taught before summer vacation (Only for students who have not completed their assigned work.)
  4. Answer following questions:
    - A. Write main features of: Permanent Settlement, Mahalwari Settlement, Ryotwari Settlement, Doctrine of Lapse, Subsidiary Alliance.
    - B. Explain different types of resources with examples.
    - C. Explain fundamental rights in detail.
  5. Map Skill:

Locate following on the Outline Political map of India: Delhi, Kolkata, Jhansi, Champaran, Madras, Mysore, Pune, Ahmedabad, Varanasi.
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**Holiday Homework (SST)      Class 7**

1. Complete Learner's Diary for topics completed so far.
  2. Learn question and answer of all topics completed so far
  3. Complete all the pending work (notes and questions answers) of chapters taught before summer vacation.( Only for those students who haven't completed their work)
  4. Answer following questions:
    - A. What are the uses of rocks?
    - B. Explain rock cycle with diagram.
    - C. Describe different layers of the earth with 3D diagram.
    - D. Mention the provision in Indian constitution that ensures equality.
    - E. Differentiate between public and private health care facilities.
    - F. Explain major components of environment
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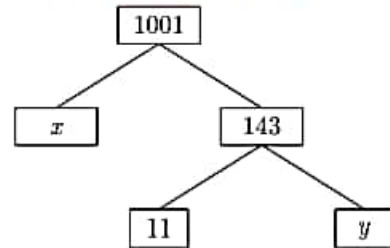
# CHAPTER 1

## Real Numbers

### OBJECTIVE QUESTIONS

1. The sum of exponents of prime factors in the prime-factorisation of 196 is  
(a) 3 (b) 4  
(c) 5 (d) 2  
[Board 2022 Term 1 Basic]
2. The values of  $x$  and  $y$  in the given figure are  
(a) 7, 13 (b) 13, 7  
(c) 9, 12 (d) 12, 9  
[Board 2022 Term 1 Standard]
3. The total number of factors of prime number is  
(a) 1 (b) 0  
(c) 2 (d) 3  
[Board 2020 Delhi Standard]
4. The HCF and the LCM of 12, 21, 15 respectively are  
(a) 3, 140 (b) 12, 420  
(c) 3, 420 (d) 420, 3  
[Board 2020 Delhi Standard]
5. The LCM of smallest two digit composite number and smallest composite number is  
(a) 12 (b) 4  
(c) 20 (d) 44  
[Board 2020 SQP Standard]
6. HCF of two numbers is 27 and their LCM is 162. If one of the numbers is 54, then the other number is  
(a) 36 (b) 35  
(c) 9 (d) 81  
[Board 2020 OD Basic]
7. HCF of 144 and 198 is  
(a) 9 (b) 18  
(c) 6 (d) 12  
[Board 2020 Delhi Basic]
8. 225 can be expressed as  
(a)  $5 \times 3^2$  (b)  $5^2 \times 3$   
(c)  $5^2 \times 3^2$  (d)  $5^3 \times 3$   
[Board 2020 Delhi Basic]
9.  $2\sqrt{3}$  is  
(a) an integer (b) a rational number  
(c) an irrational number (d) a whole number  
[Board 2020 OD Basic]
10. The product of a non-zero rational and an irrational number is  
(a) always irrational (b) always rational  
(c) rational or irrational (d) one
11. If two positive integers  $a$  and  $b$  are written as  $a = x^3 y^2$  and  $b = xy^3$ , where  $x, y$  are prime numbers, then HCF ( $a, b$ ) is  
(a)  $xy$  (b)  $xy^2$   
(c)  $x^3 y^3$  (d)  $x^2 y^2$   
[Board Term-1 2014, 2011]
12. If two positive integers  $p$  and  $q$  can be expressed as  $p = ab^2$  and  $q = a^3 b$ ; where  $a, b$  being prime numbers, then LCM ( $p, q$ ) is equal to  
(a)  $ab$  (b)  $a^2 b^2$   
(c)  $a^3 b^2$  (d)  $a^3 b^3$   
[Board 2010]
13. The least number that is divisible by all the numbers from 1 to 10 (both inclusive)  
(a) 10 (b) 100  
(c) 504 (d) 2520  
[Board Term-1 2016, 2015]

14. If  $p_1$  and  $p_2$  are two odd prime numbers such that  $p_1 > p_2$ , then  $p_1^2 - p_2^2$  is  
 (a) an even number (b) an odd number  
 (c) an odd prime number (d) a prime number
15. The number  $3^{13} - 3^{10}$  is divisible by  
 (a) 2 and 3 (b) 3 and 10  
 (c) 2, 3 and 10 (d) 2, 3 and 13
16. 1. The L.C.M. of  $x$  and 18 is 36.  
 2. The H.C.F. of  $x$  and 18 is 2.  
 What is the number  $x$ ?  
 (a) 1 (b) 2  
 (c) 3 (d) 4  
 [Board Term-1 2013]
17. If  $a = 2^3 \times 3$ ,  $b = 2 \times 3 \times 5$ ,  $c = 3^n \times 5$  and  $\text{LCM}(a, b, c) = 2^3 \times 3^2 \times 5$ , then  $n$  is  
 (a) 1 (b) 2  
 (c) 3 (d) 4
18. The least number which is a perfect square and is divisible by each of 16, 20 and 24 is  
 (a) 240 (b) 1600  
 (c) 2400 (d) 3600
19. Express 225 in prime factorization.  
 [Board 2020 Delhi Basic]
20. HCF of two numbers is 27 and their LCM is 162. If one of the numbers is 54, then what is the other number?  
 [Board 2020 OD Basic]
21. Find the HCF and LCM of 90 and 144 by the method of prime factorization.  
 [Board Term-1 2012]
22. If two positive integers  $a$  and  $b$  are written as  $a = x^3 y^2$  and  $b = xy^3$ , where  $x, y$  are prime numbers, then find HCF  $(a, b)$ .  
 [Board Term -1 2014]
23. What are the values of  $x$  and  $y$  in the given figure?  
 [Board Term -1 2012]



[Board Term -1 2012]

## ONE MARK QUESTIONS

19. What is the sum of exponents of prime factors in the prime-factorisation of 196?  
 [Board 2020 OD Standard]
20. Find the HCF and the LCM of 12, 21 and 15.  
 [Board 2020 Delhi Standard]
21. Explain why 13233343563715 is a composite number?  
 [Board Term-1 2016]
22. Find the LCM of smallest two digit composite number and smallest composite number.  
 [Board 2020 SQP Standard]
23. If  $\text{HCF}(336, 54) = 6$ , find  $\text{LCM}(336, 54)$ .  
 [Board 2019 OD]
24.  $a$  and  $b$  are two positive integers such that the least prime factor of  $a$  is 3 and the least prime factor of  $b$  is 5. Then calculate the least prime factor of  $(a + b)$ .  
 [Board Term-1 2014]
25. What is the HCF of the smallest composite number and the smallest prime number?  
 [Board Term-1 OD 2018]
26. Calculate the HCF of  $3^3 \times 5$  and  $3^2 \times 5^2$ .  
 [Board 2007]
27. If  $\text{HCF}(a, b) = 12$  and  $a \times b = 1,800$ , then find  $\text{LCM}(a, b)$ .  
 [Board 2010]
28. Find the smallest natural number by which 1200 should be multiplied so that the square root of the product is a rational number.  
 [Board Term-1 2016, 2015]



34. Can two numbers have 15 as their HCF and 175 as their LCM? Give reasons.

[Board Term-1 2012]

35. Find the least number that is divisible by all numbers between 1 and 10 (both inclusive).

[Board 2010]

36. Find HCF of the numbers given below:

[Board Term-1 2015]

37. Complete the following factor tree and find the composite number  $x$ .

[Board Term-1 2015]

### TWO MARKS QUESTIONS

38. Explain why  $(7 \times 13 \times 11) + 11$  and  $(7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1) + 3$  are composite numbers.

[Board Term-1 2012]

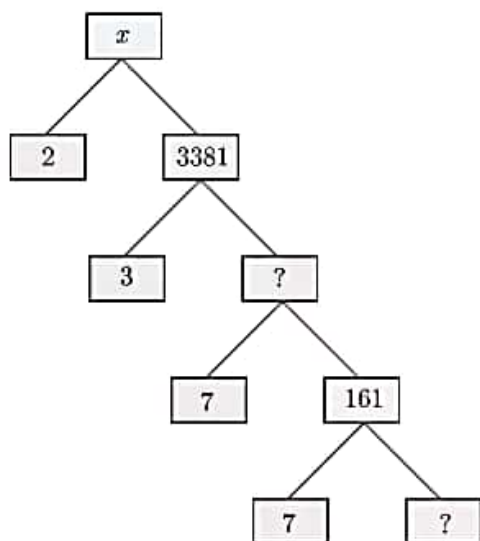
39. Explain whether  $3 \times 12 \times 101 + 4$  is a prime number or a composite number.

[Board Term-1 2017]

40. Given that  $\text{HCF}(306, 1314) = 18$ . Find  $\text{LCM}(306, 1314)$

[Board Term-1 2013]

41. Complete the following factor tree and find the composite number  $x$ .



[Board Term-1 2015, 2014]

42. Check whether  $4^n$  can end with the digit 0 for any natural number  $n$ .

[Board Term-1 2015]

43. Show that  $5\sqrt{6}$  is an irrational number.

[Board Term-1 2015]

44. Write a rational number between  $\sqrt{2}$  and  $\sqrt{3}$ .

[Board Term-1 2013]

45. Show that 571 is a prime number.

46. If two positive integers  $p$  and  $q$  are written as  $p = a^2 b^3$  and  $q = a^3 b$ , where  $a$  and  $b$  are prime numbers then verify  $\text{LCM}(p, q) \times \text{HCF}(p, q) = pq$

[Sample Paper 2017]

47. Prove that  $3 + \sqrt{5}$  is an irrational number.

[Board 2010]

48. Show that any positive even integer can be written in the form  $6q, 6q + 2$  or  $6q + 4$ , where  $q$  is an integer.

[Board Term-1, 2016]

### THREE MARKS QUESTIONS

49. Given that  $\sqrt{5}$  is irrational, prove that  $2\sqrt{5} - 3$  is an irrational number.

[Board 2020 SQP Standard]

50. Given that  $\sqrt{2}$  is irrational, prove that  $(5 + 3\sqrt{2})$  is an irrational number.

[Board 2018]

51. Write the smallest number which is divisible by both 306 and 657.

[Board 2019 OD]

52. 144 cartons of Coke cans and 90 cartons of Pepsi cans are to be stacked in a canteen. If each stack is of the same height and if it equal contain cartons of the same drink, what would be the greatest number of cartons each stack would have?

[Board Term-1 2011]

53. Three bells toll at intervals of 9, 12, 15 minutes respectively. If they start tolling together, after what time will they next toll together?

[Board Term-1 2011]

54. Find HCF and LCM of 16 and 36 by prime factorization and check your answer.

[Board 2009]

55. The length, breadth and height of a room are 8 m 50 cm, 6 m 25 cm and 4 m 75 cm respectively. Find the length of the longest rod that can measure the dimensions of the room exactly.

[Board Term-1 2016]

## FIVE MARKS QUESTIONS

56. If  $p$  is prime number, then prove that  $\sqrt{p}$  is an irrational.

[Board Term-1 2013]

57. Prove that  $\sqrt{3}$  is an irrational number.

[Board 2020 OD Basic]

58. Prove that  $\sqrt{5}$  is an irrational number and hence show that  $2 - \sqrt{5}$  is also an irrational number.

[Board Term-1 2011]

59. Find HCF and LCM of 378, 180 and 420 by prime factorization method. Is  $\text{HCF} \times \text{LCM}$  of these numbers equal to the product of the given three numbers?

[Board 2009]

60. State Fundamental theorem of Arithmetic. Find LCM of numbers 2520 and 10530 by prime factorization.

[Board Term-1 2016]

OR

61. Can the number  $6^n$ ,  $n$  being a natural number, end with the digit 5? Give reasons.

[Board Term-1 2015]

62. State Fundamental theorem of Arithmetic. Is it possible that HCF and LCM of two numbers be 24 and 540 respectively. Justify your answer.

[Board Term-1 2015]

# CHAPTER 2

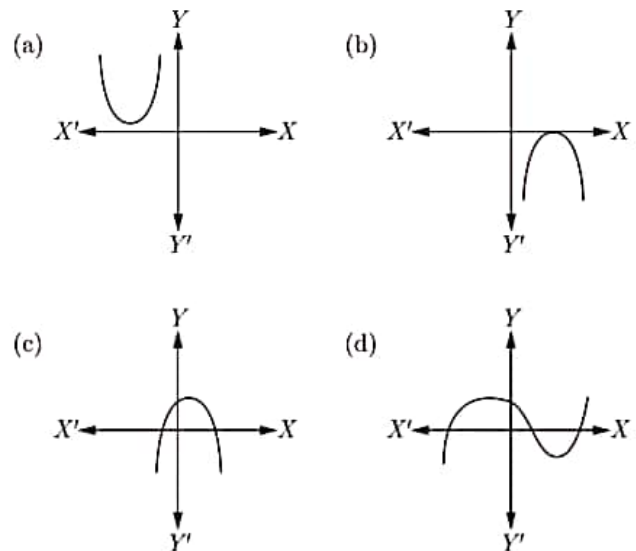
## Polynomials

### OBJECTIVE QUESTIONS

1. If the sum of the zeroes of the quadratic polynomial  $kx^2 + 2x + 3k$  is equal to their product, then  $k$  equals  
(a)  $\frac{1}{3}$  (b)  $-\frac{1}{3}$   
(c)  $\frac{2}{3}$  (d)  $-\frac{2}{3}$  [Board 2020 OD Basic]
2. If  $\alpha$  and  $\beta$  are the zeroes of the polynomial  $x^2 + 2x + 1$ , then  $\frac{1}{\alpha} + \frac{1}{\beta}$  is equal to  
(a)  $-2$  (b)  $2$   
(c)  $0$  [Board 2020 Delhi Basic]
3. If  $\alpha$  and  $\beta$  are the zeroes of the polynomial  $2x^2 - 13x + 6$ , then  $\alpha + \beta$  is equal to  
(a)  $-3$  (b)  $3$   
(c)  $\frac{13}{2}$  (d)  $-\frac{13}{2}$  [Board 2020 Delhi Basic]
4. If one zero of a quadratic polynomial  $(kx^2 + 3x + k)$  is 2, then the value of  $k$  is  
(a)  $\frac{5}{6}$  (b)  $-\frac{5}{6}$   
(c)  $\frac{6}{5}$  (d)  $-\frac{6}{5}$  [Board 2020 Delhi Basic]
5. The maximum number of zeroes a cubic polynomial can have, is  
(a) 1 (b) 4  
(c) 2 (d) 3 [Board 2020 OD Basic]
6. If one zero of the quadratic polynomial  $x^2 + 3x + k$  is 2, then the value of  $k$  is  
(a) 10 (b)  $-10$   
(c)  $-7$  (d)  $-2$  [Board 2020 Delhi Standard]
7. The quadratic polynomial, the sum of whose zeroes is  $-5$  and their product is 6, is  
(a)  $x^2 + 5x + 6$  (b)  $x^2 - 5x + 6$   
(c)  $x^2 - 5x - 6$  (d)  $-x^2 + 5x + 6$  [Board 2020 Delhi Standard]
8. If one zero of the polynomial  $(3x^2 + 8x + k)$  is the reciprocal of the other, then value of  $k$  is  
(a) 3 (b)  $-3$   
(c)  $\frac{1}{3}$  (d)  $-\frac{1}{3}$  [Board 2020 OD Basic]
9. The zeroes of the polynomial  $x^2 - 3x - m(m + 3)$  are  
(a)  $m, m + 3$  (b)  $-m, m + 3$   
(c)  $m, -(m + 3)$  (d)  $-m, -(m + 3)$  [Board 2020 OD Standard]
10. The value of  $x$ , for which the polynomials  $x^2 - 1$  and  $x^2 - 2x + 1$  vanish simultaneously, is  
(a) 2 (b)  $-2$   
(c)  $-1$  (d) 1
11. If  $\alpha$  and  $\beta$  are zeroes and the quadratic polynomial  $f(x) = x^2 - x - 4$ , then the value of  $\frac{1}{\alpha} + \frac{1}{\beta} - \alpha\beta$  is  
(a)  $\frac{15}{4}$  (b)  $-\frac{15}{4}$   
(c) 4 (d) 15
12. The value of the polynomial  $x^6 - x^5 + x^2 - x + 1$  is  
(a) positive for all the real numbers  
(b) negative for all the real numbers  
(c) 0

- (d) depends on value of  $x$
13. Lowest value of  $x^2 + 4x + 2$  is  
 (a) 0 (b) -2  
 (c) 2 (d) 4
14. If the sum of the zeroes of the polynomial  $f(x) = 2x^3 - 3kx^2 + 4x - 5$  is 6, then the value of  $k$  is  
 (a) 2 (b) -2  
 (c) 4 (d) -4
15. If the square of difference of the zeroes of the quadratic polynomial  $x^2 + px + 45$  is equal to 144, then the value of  $p$  is  
 (a)  $\pm 9$  (b)  $\pm 12$   
 (c)  $\pm 15$  (d)  $\pm 18$
16. If one of the zeroes of the quadratic polynomial  $(k-1)x^2 + kx + 1$  is -3, then the value of  $k$  is  
 (a)  $\frac{4}{3}$  (b)  $-\frac{4}{3}$   
 (c)  $\frac{2}{3}$  (d)  $-\frac{2}{3}$
17. A quadratic polynomial, whose zeroes are -3 and 4, is  
 (a)  $x^2 - x + 12$  (b)  $x^2 + x + 12$   
 (c)  $\frac{x^2}{2} - \frac{x}{2} - 6$  (d)  $2x^2 + 2x - 24$
18. If the zeroes of the quadratic polynomial  $x^2 + (a+1)x + b$  are 2 and -3, then  
 (a)  $a = -7, b = -1$   
 (b)  $a = 5, b = -1$   
 (c)  $a = 2, b = -6$   
 (d)  $a = 0, b = -6$
19. The zeroes of the quadratic polynomial  $x^2 + 99x + 127$  are  
 (a) both positive  
 (b) both negative  
 (c) one positive and one negative  
 (d) both equal

20. The zeroes of the quadratic polynomial  $x^2 + kx + k$  where  $k \neq 0$ ,  
 (a) cannot both be positive  
 (b) cannot both be negative  
 (c) are always unequal  
 (d) are always equal
21. If the zeroes of the quadratic polynomial  $ax^2 + bx + c$ , where  $c \neq 0$ , are equal, then  
 (a)  $c$  and  $a$  have opposite signs  
 (b)  $c$  and  $b$  have opposite signs  
 (c)  $c$  and  $a$  have same sign  
 (d)  $c$  and  $b$  have the same sign
22. If one of the zeroes of a quadratic polynomial of the form  $x^2 + ax + b$  is the negative of the other, then it  
 (a) has no linear term and the constant term is negative.  
 (b) has no linear term and the constant term is positive.  
 (c) can have a linear term but the constant term is negative.  
 (d) can have a linear term but the constant term is positive.
23. Which of the following is not the graph of a quadratic polynomial?



## ONE MARK QUESTIONS

24. If the sum and product of the zeroes of a quadratic polynomial are 3 and  $-10$  respectively, find the quadratic polynomial.

[Board 2020 Delhi Basic]

25. If the sum of the zeroes of the quadratic polynomial  $kx^2 + 2x + 3k$  is equal to their product, then what is the value of  $k$ ?

[Board 2020 OD Basic]

26. If  $\alpha$  and  $\beta$  are the zeroes of the polynomial  $2x^2 - 13x + 6$ , then what is the value of  $\alpha + \beta$ ?

[Board 2020 Delhi Basic]

27. If one zero of a quadratic polynomial  $(kx^2 + 3x + k)$  is 2, then what is the value of  $k$ ?

[Board 2020 Delhi Basic]

28. If one of the zeroes of the quadratic polynomial  $(k-1)x^2 + kx + 1$  is  $-3$ , then what is the value of  $k$ ?

[Board Term-1 Delhi 2013]

29. If one zero of the polynomial  $(3x^2 + 8x + k)$  is the reciprocal of the other, then what is the value of  $k$ ?

[Board 2020 OD Basic]

30. What is the value of  $x$ , for which the polynomials  $x^2 - 1$  and  $x^2 - 2x + 1$  vanish simultaneously?

[Board Term-1 OD 2011]

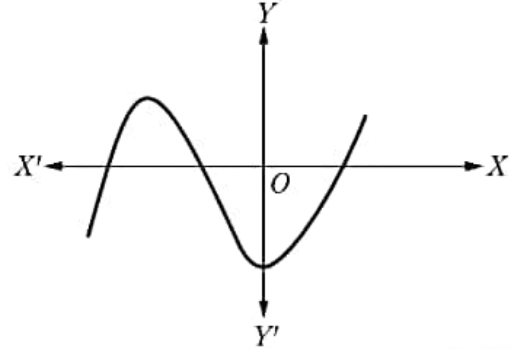
31. If the square of difference of the zeroes of the quadratic polynomial  $x^2 + px + 45$  is equal to 144, then what is the value of  $p$ ?

[Board Term-1 Foreign 2014]

32. Find a quadratic polynomial, whose zeroes are  $-3$  and  $4$ ?

[Board 2010]

33. The graph of a polynomial is shown in Figure. What is the number of its zeroes?



[Board 2020 Delhi Basic]

34. If  $\alpha$  and  $\beta$  are zeroes of the quadratic polynomial  $f(x) = x^2 - x - 4$ , then what is the value of  $\frac{1}{\alpha} + \frac{1}{\beta} - \alpha\beta$ ?

[Board Term-1 Delhi 2017]

35. What is the lowest value of  $x^2 + 4x + 2$ ?

[Board Term-1 OD 2013]

36. If the sum of the zeroes of the polynomial  $f(x) = 2x^3 - 3kx^2 + 4x - 5$  is 6, then what is the value of  $k$ ?

[Board Term-1 2016]

37. Calculate the zeroes of the polynomial  $p(x) = 4x^2 - 12x + 9$ .

[Board Term-1 2010]

38. If sum of the zeroes of the quadratic polynomial  $3x^2 - kx + 6$  is 3, then find the value of  $k$ .

[Board 2009]

39. If  $-1$  is a zero of the polynomial  $f(x) = x^2 - 7x - 8$ , then calculate the other zero.

[Board Term-1 Foreign 2015]

40. If zeroes of the polynomial  $x^2 + 4x + 2a$  are  $a$  and  $\frac{2}{a}$ , then find the value of  $a$ .

[Board Term-1 2016]

41. Find all the zeroes of  $f(x) = x^2 - 2x$ .

[Board Term-1 2013]

42. Find the condition that zeroes of polynomial  $p(x) = ax^2 + bx + c$  are reciprocal of each other.

[Board Term-1 2012]

43. Find the values of  $a$  and  $b$ , if they are the zeroes of polynomial  $x^2 + ax + b$ .

[Board Term-1 2013]

44. What are the zeroes of the polynomial  $x^2 - 3x - m(m + 3)$  ?

[Board 2020 OD Standard]

## TWO MARKS QUESTIONS

45. Find the zeroes of the quadratic polynomial  $\sqrt{3}x^2 - 8x + 4\sqrt{3}$ .

[Board Term-1 2013]

46. Find a quadratic polynomial, the sum and product of whose zeroes are 6 and 9 respectively. Hence find the zeroes.

[Board Term-1 2016]

47. Form a quadratic polynomial  $p(x)$  with 3 and  $-\frac{2}{5}$  as sum and product of its zeroes, respectively.

[Board Term-1 2012]

48. If  $\alpha$  and  $\beta$  are the zeroes of the polynomial  $f(x) = 5x^2 - 7x + 1$  then find the value of  $\left(\frac{\alpha}{\beta} + \frac{\beta}{\alpha}\right)$

[Board 2020 OD Basic]

49. If  $\alpha$  and  $\beta$  are the zeroes of a polynomial  $x^2 - 4\sqrt{3}x + 3$ , then find the value of  $\alpha + \beta - \alpha\beta$ .

[Board Term-1 2015]

50. If one of the zeroes of the quadratic polynomial  $f(x) = 14x^2 - 42k^2x - 9$  is negative of the other, find the value of ' $k$ '.

[Board Term-1 2012]

51. If one zero of the polynomial  $2x^2 + 3x + \lambda$  is  $\frac{1}{2}$ , find the value of  $\lambda$  and the other zero.

[Board Term-1 2012]

52. Find the value of  $k$  such that the polynomial  $x^2 - (k + 6)x + 2(2k + 1)$  has sum of its zeros equal to half of their product.

[Board 2019 Delhi]

53. If the zeroes of the polynomial  $x^2 + px + q$  are double in value to the zeroes of  $2x^2 - 5x - 3$ , find the value of  $p$  and  $q$ .

[Board Term-1 2012]

54. If  $\alpha$  and  $\beta$  are zeroes of  $x^2 - (k - 6)x + 2(2k - 1)$ , find the value of  $k$  if  $\alpha + \beta = \frac{1}{2}\alpha\beta$ .

[Board Term-1 2013]

## THREE MARKS QUESTIONS

55. Find a quadratic polynomial whose zeroes are reciprocals of the zeroes of the polynomial  $f(x) = ax^2 + bx + c$ ,  $a \neq 0$ ,  $c \neq 0$ .

[Board 2020 Delhi Standard]

56. Verify whether 2, 3 and  $\frac{1}{2}$  are the zeroes of the polynomial  $p(x) = 2x^3 - 11x^2 + 17x - 6$ .

[Board Term-1 2013]

57. If the sum and product of the zeroes of the polynomial  $ax^2 - 5x + c$  are equal to 10 each, find the value of ' $a$ ' and ' $c$ '.

[Board Term-1 2011]

58. If one the zero of a polynomial  $3x^2 - 8x + 2k + 1$  is seven times the other, find the value of  $k$ .

[Board Term-1 2011]

59. Quadratic polynomial  $2x^2 - 3x + 1$  has zeroes as  $\alpha$  and  $\beta$ . Now form a quadratic polynomial whose zeroes are  $3\alpha$  and  $3\beta$ .

[Board Term-1 2015]

60. If  $\alpha$  and  $\beta$  are the zeroes of the polynomial  $f(x) = x^2 - 4x - 5$  then find the value of  $\alpha^2 + \beta^2$

[Board 2020 Delhi Basic]

61. Find the quadratic polynomial, the sum and product of whose zeroes are  $-3$  and  $2$  respectively. Hence find the zeroes.

[Board 2020 OD Basic]

62. Find the zeroes of the quadratic polynomial  $6x^2 - 3 - 7x$  and verify the relationship between the zeroes and the coefficients.

[Board 2020 Delhi Basic]

63. If the zeroes of the quadratic polynomial  $x^2 + (a + 1)x + b$  are 2 and  $-3$ , then find the value of  $a$  and  $b$ .

[Board Term-1 2013]

64. If  $\alpha$  and  $\beta$  are the zeroes of the polynomial  $6y^2 - 7y + 2$ , find a quadratic polynomial whose zeroes are  $\frac{1}{\alpha}$  and  $\frac{1}{\beta}$ .

[Board Term-1 2011]

65. Show that  $\frac{1}{2}$  and  $\frac{-3}{2}$  are the zeroes of the polynomial  $4x^2 + 4x - 3$  and verify relationship between zeroes and coefficients of the polynomial.

[Board Term-1 2011]

66. A teacher asked 10 of his students to write a polynomial in one variable on a paper and then to handover the paper. The following were the answers given by the students :

$$2x + 3, \quad 3x^2 + 7x + 2, \quad 4x^3 + 3x^2 + 2, \quad x^3 + \sqrt{3}x + 7, \\ 7x + \sqrt{7}, \quad 5x^3 - 7x + 2, \quad 2x^2 + 3 - \frac{5}{x}, \quad 5x - \frac{1}{2}, \\ ax^3 + bx^2 + cx + d, \quad x + \frac{1}{x}.$$

Answer the following question :

- (i) How many of the above ten, are not polynomials?  
 (ii) How many of the above ten, are quadratic polynomials?

[Board 2020 OD Standard]

67. Find the zeroes of the quadratic polynomial  $5x^2 + 8x - 4$  and verify the relationship between the zeroes and the coefficients of the polynomial.

[Board Term-1 2013]

68. If  $\alpha$  and  $\beta$  are the zeroes of a quadratic polynomial such that  $\alpha + \beta = 24$  and  $\alpha - \beta = 8$ . Find the quadratic polynomial having  $\alpha$  and  $\beta$  as its zeroes.

[Board 2009]

69. If  $\alpha, \beta$  and  $\gamma$  are zeroes of the polynomial  $6x^3 + 3x^2 - 5x + 1$ , then find the value of  $\alpha^{-1} + \beta^{-1} + \gamma^{-1}$ .

[Board 2010]

71. Find the value for  $k$  for which  $x^4 + 10x^3 + 25x^2 + 15x + k$  is exactly divisible by  $x + 7$ .

[Board Term 2010]

72. On dividing the polynomial  $4x^4 - 5x^3 - 39x^2 - 46x - 2$  by the polynomial  $g(x)$ , the quotient is  $x^2 - 3x - 5$  and the remainder is  $-5x + 8$ . Find the polynomial  $g(x)$ .

[Board 2009]

73. If the squared difference of the zeroes of the quadratic polynomial  $f(x) = x^2 + px + 45$  is equal to 144, find the value of  $p$ .

[Board 2008]

## FIVE MARKS QUESTIONS

74. Polynomial  $x^4 + 7x^3 + 7x^2 + px + q$  is exactly divisible by  $x^2 + 7x + 12$ , then find the value of  $p$  and  $q$ .

[Board Term-1 2015]

75. If  $\alpha$  and  $\beta$  are the zeroes of the polynomial  $p(x) = 2x^2 + 5x + k$  satisfying the relation,  $\alpha^3 + \beta^3 + \alpha\beta = \frac{21}{4}$ , then find the value of  $k$ .

[Board Term-1 2012]

76. Find the zeroes of the quadratic polynomial  $7y^2 - \frac{11}{3}y - \frac{2}{3}$  and verify the relationship between the zeroes and the coefficients.

[Board 2019 OD]

77. If  $\alpha$  and  $\beta$  are the zeroes of polynomial  $p(x) = 3x^2 + 2x + 1$ , find the polynomial whose zeroes are  $\frac{1 - \alpha}{1 + \alpha}$  and  $\frac{1 - \beta}{1 + \beta}$ .

[Board Term-1 2010, 2012]

# CHAPTER 3

## Pair of Linear Equation in Two Variables

### OBJECTIVE QUESTIONS

1. The 2 digit number which becomes  $\frac{5}{4}$ th of itself when its digits are reversed. The difference in the digits of the number being 1, then the two digits number is  
(a) 45 (b) 54  
(c) 36 (d) None of these  
[Board 2022 Term-1 SQP STD]
2. In a number of two digits, unit's digit is twice the tens digit. If 36 be added to the number, the digits are reversed. The number is  
(a) 36 (b) 63  
(c) 48 (d) 84  
[Board 2022 Term-1 SQP Basic]
3. If  $3x + 4y : x + 2y = 9 : 4$ , then  $3x + 5y : 3x - y$  is equal to  
(a) 4 : 1 (b) 1 : 4  
(c) 7 : 1 (d) 1 : 7  
[Board 2022 Term-1 STD]
4. The pair of equations  $3^{x+y} = 81$ ,  $81^{x-y} = 3$  has  
(a) no solution  
(b) unique solution  
(c) infinitely many solutions  
(d)  $x = 2\frac{1}{8}, y = 1\frac{7}{8}$   
[Board 2022 Term-1 Basic]
5. A fraction becomes 4 when 1 is added to both the numerator and denominator and it becomes 7 when 1 is subtracted from both the numerator and denominator. The numerator of the given fraction is  
(a) 2 (b) 3  
(c) 5 (d) 15  
[Board 2022 Term-1 Basic]
6. For which value(s) of  $p$ , will the lines represented by the following pair of linear equations be parallel  
 $3x - y - 5 = 0$  and  $6x - 2y - p = 0$   
(a) all real values except 10 (b) 10  
(c)  $5/2$  (d)  $1/2$   
[Board Term-1 Delhi 2012]
7.  $x$  and  $y$  are 2 different digits. If the sum of the two digit numbers formed by using both the digits is a perfect square, then value of  $x + y$  is  
(a) 10 (b) 11  
(c) 12 (d) 13  
[Board 2022 Term-1 STD]
8. The value of  $k$  for which the system of linear equations  $x + 2y = 3$ ,  $5x + ky + 7 = 0$  is inconsistent is  
(a)  $-\frac{14}{3}$  (b)  $\frac{2}{5}$   
(c) 5 (d) 10  
[Board 2020 OD Standard]
9. The value of  $k$  for which the system of equations  $x + y - 4 = 0$  and  $2x + ky = 3$ , has no solution, is  
(a) -2 (b)  $\neq 2$   
(c) 3 (d) 2  
[Board 2020 Delhi Standard]
10. The pair of linear equations  $2kx + 5y = 7$ ,  $6x - 5y = 11$  has a unique solution, if  
(a)  $k \neq -3$  (b)  $k \neq \frac{2}{3}$   
(c)  $k \neq 5$  (d)  $k \neq \frac{2}{9}$   
[Board Term-1 SQP 2012]
11. The pair of equations  $x + 2y + 5 = 0$  and  $-3x - 6y + 1 = 0$  has  
(a) a unique solution



- (b) exactly two solutions  
 (c) infinitely many solutions  
 (d) no solution

[Board Term-1 Foreign 2012]

12. If a pair of linear equations is consistent, then the lines will be

- (a) parallel  
 (b) always coincident  
 (c) intersecting or coincident  
 (d) always intersecting

[Board Term-1 OD 2013]

13. The pair of equations  $y = 0$  and  $y = -7$  has

- (a) one solution  
 (b) two solutions  
 (c) infinitely many solutions  
 (d) no solution

[Board Term-1 SQP 2017]

14. For what value of  $k$ , do the equations  $3x - y + 8 = 0$  and  $6x - ky = -16$  represent coincident lines ?

- (a)  $\frac{1}{2}$  (b)  $-\frac{1}{2}$   
 (c) 2 (d)  $-2$

[Board Term-1 Foreign 2016]

15. The pair of equations  $x = a$  and  $y = b$  graphically represents lines which are

- (a) parallel  
 (b) intersecting at  $(b, a)$   
 (c) coincident  
 (d) intersecting at  $(a, b)$

[Board Term-1 Foreign 2011]

16. If the lines given by  $3x + 2ky = 2$  and  $2x + 5y + 1 = 0$  are parallel, then the value of  $k$  is

- (a)  $-\frac{5}{4}$  (b)  $\frac{2}{5}$   
 (c)  $\frac{15}{4}$  (d)  $\frac{3}{2}$

[Board Term-1 OD 2011]

17. The value of  $c$  for which the pair of equations  $cx - y = 2$  and  $6x - 2y = 3$  will have is

- (a) 3 (b)  $-3$   
 (c)  $-12$  (d) no value

[Board Term-1 SQP 2014]

18. One equation of a pair of dependent linear equations  $-5x + 7y = 2$  The second equation can be

- (a)  $10x + 14y + 4 = 0$   
 (b)  $-10x - 14y + 4 = 0$   
 (c)  $-10x + 14y + 4 = 0$   
 (d)  $10x - 14y = -4$

[Board Term-1 OD 2013]

19. If  $x = a$  and  $y = b$  is the solution of the equations  $x - y = 2$  and  $x + y = 4$ , then the values of  $a$  and  $b$  are, respectively

- (a) 3 and 5 (b) 5 and 3  
 (c) 3 and 1 (d)  $-1$  and  $-3$

[Board Term-1 OD 2015]

20. Aruna has only ₹ 1 and ₹ 2 coins with her. If the total number of coins that she has is 50 and the amount of money with her is ₹ 75, then the number of ₹ 1 and ₹ 2 coins are, respectively

- (a) 35 and 15 (b) 35 and 20  
 (c) 15 and 35 (d) 25 and 25

[Board Term-1 OD 2016]

21. The father's age is six times his son's age. Four years hence, the age of the father will be four times his son's age. The present ages (in year) of the son and the father are, respectively.

- (a) 4 and 24 (b) 5 and 30  
 (c) 6 and 36 (d) 3 and 24

[Board Term-1 Delhi 2016]

## ONE MARK QUESTIONS

22. Find the value of  $k$  for which the system of linear equations  $x + 2y = 3$ ,  $5x + ky + 7 = 0$  is inconsistent.

[Board 2020 OD Standard]

23. Find the value of  $k$  for which the system of equations  $x + y - 4 = 0$  and  $2x + ky = 3$ , has no solution.

[Board 2020 Delhi Standard]

24. For which value(s) of  $p$ , will the lines represented by the following pair of linear equations be parallel ?

$$3x - y - 5 = 0, \quad 6x - 2y - p = 0$$

[Board Term-1 OD 2017]

25. The 2 digit number which becomes  $\frac{1}{5}$  th of itself when its digits are reversed. If the difference in the digits of the number being 1, what is the two digits number?  
[Board Term-1 Delhi 2011]
26. In a number of two digits, unit's digit is twice the tens digit. If 36 be added to the number, the digits are reversed. What is the number ?  
[Board Term-1 Delhi 2016]
27. If  $3x + 4y : x + 2y = 9 : 4$ , then find the value of  $3x + 5y : 3x - y$ .  
[Board Term-1 Foreign 2012]
28. fraction becomes 4 when 1 is added to both the numerator and denominator and it becomes 7 when 1 is subtracted from both the numerator and denominator. What is the numerator of the given fraction ?  
[Board Term-1 Foreign 2016]
29.  $x$  and  $y$  are 2 different digits. If the sum of the two digit numbers formed by using both the digits is a perfect square, then what is the value of  $x + y$  ?  
[Board Term-1 OD 2013]
30. If a pair of linear equations is consistent, then the lines will be intersecting or coincident. Justify.  
[Board 2008]
31. The pair of equations  $y = 0$  and  $y = -7$  has no solution. Justify.  
[Board Term-1 Foreign 2014]
32. If the equations  $kx - 2y = 3$  and  $3x + y = 5$  represent two intersecting lines at unique point, then the value of  $k$  is .....  
[Board Term-1 2011]
33. Find whether the pair of linear equations  $y = 0$  and  $y = -5$  has no solution, unique solution or infinitely many solutions.  
[Board Term-1 OD 2011]
34. If  $am = bl$ , then find whether the pair of linear equations  $ax + by = c$  and  $lx + my = n$  has no solution, unique solution or infinitely many solutions.  
[Board Term-1 OD 2015]
35. If  $ad \neq bc$ , then find whether the pair of linear equations  $ax + by = p$  and  $cx + dy = q$  has no solution, unique solution or infinitely many solutions.  
[Board Term-1 Delhi 2015]
36. Two lines are given to be parallel. The equation of one of the lines is  $4x + 3y = 14$ , then find the equation of the second line.  
[Board 2007]
37. Find whether the lines represented by  $2x + y = 3$  and  $4x + 2y = 6$  are parallel, coincident or intersecting.  
[Board Term-1 Delhi 2016]
38. Given the linear equation  $3x + 4y = 9$ . Write another linear equation in these two variables such that the geometrical representation of the pair so formed is:  
(1) intersecting lines  
(2) coincident lines.  
[Board Term-1 2016]
39. Find the value(s) of  $k$  so that the pair of equations  $x + 2y = 5$  and  $3x + ky + 15 = 0$  has a unique solution.  
[Board 2019 OD]
40. If  $2x + y = 23$  and  $4x - y = 19$ , find the value of  $(5y - 2x)$  and  $(\frac{y}{x} - 2)$ .  
[Board 2020 OD Standard]
41. Find whether the following pair of linear equation is consistent or inconsistent:  
 $3x + 2y = 8, 6x - 4y = 9$   
[Board Term-1 2016]
42. Is the system of linear equations  $2x + 3y - 9 = 0$  and  $4x + 6y - 18 = 0$  consistent? Justify your answer.  
[Board Term-1 2012]
43. For what value of  $k$ , the pair of linear equations  $kx - 4y = 3, 6x - 12y = 9$  has an infinite number of solutions ?  
[Board Term-1 2012]
44. Solve the following pair of linear equations by substitution method:  
 $3x + 2y - 7 = 0, 4x + y - 6 = 0$   
[Board Term-1 2015]

45. Solve :  $99x + 101y = 499$ ,  $101x + 99y = 501$   
[Board Term-1 2012]

46. Solve graphically :  $2x - 3y + 13 = 0$ ;  $3x - 2y + 12 = 0$   
[Board 2020 OD Basic]

47. Solve graphically :  $2x + 3y = 2$ ,  $x - 2y = 8$   
[Board 2020 Delhi Basic]

48. A fraction becomes  $\frac{1}{3}$  when 2 is subtracted from the numerator and it becomes  $\frac{1}{2}$  when 1 is subtracted from the denominator- Find the fraction.  
[Board 2019 Delhi]

49. Represent the following pair of linear equations graphically and hence comment on the condition of consistency of this pair.

$$x - 5y = 6 \text{ and } 2x - 10y = 12.$$

[Board Term-1 2011]

50. Determine the values of  $m$  and  $n$  so that the following system of linear equation have infinite number of solutions :

$$\begin{aligned} (2m - 1)x + 3y - 5 &= 0 \\ 3x + (n - 1)y - 2 &= 0 \end{aligned}$$

[Board Term-1 2013]

51. For what value of  $p$  will the following system of equations have no solution ?

$$(2p - 1)x + (p - 1)y = 2p + 1; \quad y + 3x - 1 = 0$$

[Board Term-1 2011]

52. Solve for  $x$  and  $y$  :

$$\frac{x}{2} + \frac{2y}{3} = -1 \text{ and } x - \frac{y}{3} = 3$$

[Board Term-1 2015]

53. Solve the following pair of linear equations :

$$8x + 5y = 9, \quad 3x + 2y = 4$$

[Board Term-1 2015]

54. Solve for  $x$  and  $y$  :

$$\frac{x+1}{2} + \frac{y-1}{3} = 9; \quad \frac{x-1}{3} + \frac{y+1}{2} = 8.$$

[Board Term-1 Delhi 2011]

55. Given the linear equation  $2x + 3y - 8 = 0$ , write another linear equation in two variables such that the geometrical representation of the pair so formed is :

- intersecting lines
- parallel lines
- coincident lines.

[Board Term-1 2014]

56. Solve for  $x$  and  $y$  :

$$ax + by = \frac{a+b}{2} \text{ and } 3x + 5y = 4$$

[Board Term-1 2011]

57. Find whether the following pair of linear equations has a unique solutions. If yes, find the solution :

$$7x - 4y = 49, \quad 5x - 6y = 57.$$

[Board Term-1 2017]

## FIVE MARKS QUESTIONS

58. For what value of  $k$ , which the following pair of linear equations have infinitely many solutions:

$$2x + 3y = 7 \text{ and } (k + 1)x + (2k - 1)y = 4k + 1$$

[Board 2019 Delhi]

59. Find  $c$  if the system of equations  $cx + 3y + (3 - c) = 0$ ;  $12x + cy - c = 0$  has infinitely many solutions?

[Board 2019 Delhi]

60. Determine graphically the coordinates of the vertices of triangle, the equations of whose sides are given by  $2y - x = 8$ ,  $5y - x = 14$  and  $y - 2x = 1$ .

[Board 2020 Delhi Standard]

61. Determine graphically whether the following pair of linear equations :

$$3x - y = 7 \text{ and } 2x + 5y + 1 = 0 \text{ has :}$$

- unique solution
- infinitely many solutions or
- no solution.

[Board Term-1 2015]

62. Aftab tells his daughter, '7 years ago, I was seven times as old as you were then. Also, 3 years from now, I shall be three times as old as you will be.' Represent this situation algebraically and graphically.

[Board Term-1 2015]

63. For Uttarakhand flood victims two sections A and B of class contributed Rs. 1,500. If the contribution of X-A was Rs. 100 less than that of X-B, find graphically the amounts contributed by both the sections.

[Board Term-1 2016]

64. Solve graphically the pair of linear equations :

$$3x - 4y + 3 = 0 \text{ and } 3x + 4y - 21 = 0$$

Find the co-ordinates of the vertices of the triangular

region formed by these lines and  $x$ -axis. Also, calculate the area of this triangle.

[Board Term-1 2015]

65. The cost of 2 kg of apples and 1kg of grapes on a day was found to be Rs. 160. After a month, the cost of 4kg of apples and 2kg of grapes is Rs. 300. Represent the situations algebraically and geometrically.

[Board Term-1 2013]

66. Solve for  $x$  and  $y$  :

$$2x - y + 3 \text{ and } 3x - 5y + 1 = 0$$

[Board Term-1 2015]

67. Draw the graphs of the equations  $x - y + 1 = 0$  and  $3x + 2y - 12 = 0$ . Determine the co-ordinates of the vertices of the triangle formed by these lines and the  $X$ -axis and shade the triangular region.

[Board Term-1 2013]

68. Solve the following pair of linear equations graphically:

$$x + 3y = 12, 2x - 3y = 12$$

Also shade the region bounded by the line  $2x - 3y = 2$  and both the co-ordinate axes.

[Board Term-1 2013, 2012]

69. Solve the following pair of linear equations graphically:

$$x - y = 1, 2x + y = 8$$

Also find the co-ordinates of the points where the lines represented by the above equation intersect  $y$ -axis.

[Board Term-1 Delhi 2012]

70. Draw the graph of the following equations:

$$2x - y = 1, x + 2y = 13$$

Find the solution of the equations from the graph and shade the triangular region formed by the lines and the  $y$ -axis.

[Board Term-1 OD 2012]

71. Solve the following pair of equations graphically:

$$2x + 3y = 12, x - y - 1 = 0.$$

Shade the region between the two lines represented by the above equations and the  $X$ -axis.

[Board Term-1 2013]

72. Solve  $x + y = 5$  and  $2x - 3y = 4$  by elimination method and the substitution method.

[Board Term-1 2015]

73. For what values of  $a$  and  $b$  does the following pair of linear equations have infinite number of solution ?

$$2x + 3y = 7, a(x + y) - b(x - y) = 3a + b - 2$$

[Board Term-1 2015]

74. Find the value of  $p$  and  $q$  for which the system of equations represent coincident lines  $2x + 3y = 7$ ,  $(p + q + 1)x + (p + 2q + 2)y = 4(p + q) + 1$

[Board Term-1 Delhi 2012]

## WORD PROBLEMS

75. In an election contested between A and B, A obtained votes equal to twice the no. of persons on the electoral roll who did not cast their votes and this later number was equal to twice his majority over B. If there were 1,8000 persons on the electoral roll. How many votes for B.

[Board Term-1 2012]

76. Sum of the ages of a father and the son is 40 years. If father's age is three times that of his son, then find their respective ages.

[Board Term-1 2015]

77. Half the perimeter of a rectangular garden, whose length is 4 m more than its width, is 36 m. Find the dimensions of garden.

[Board Term-1 2013]

78. A part of monthly hostel charge is fixed and the remaining depends on the number of days one has taken food in the mess. When Swati takes food for 20 days, she has to pay Rs. 3,000 as hostel charges whereas Mansi who takes food for 25 days Rs. 3,500 as hostel charges. Find the fixed charges and the cost of food per day.

[Board Term-1 2016, 2015]

79. The present age of the father is twice the sum of the ages of his 2 children. After 20 years, his age will be equal to the sum of the ages of his children. Find the age of the father.

[Board Term-1 2012]

80. In the figure,  $ABCDE$  is a pentagon with  $BE \parallel CD$  and  $BC \parallel DE$ .  $BC$  is perpendicular to  $CD$ .  $AB = 5$  cm,  $AE = 5$  cm,  $BE = 7$  cm,  $BC = x - y$  and  $CD = x + y$ .

## पी एम श्री केन्द्रीय विद्यालय पासीघाट

### ग्रीष्मकालीन अवकाश गृहकार्य - 2024-25

#### कक्षा - दसवीं (हिंदी-अ)

1. पाठ्यक्रम की कोई भी एक कविता याद करके तथा उसका वीडियो बनाकर मुझे व्यक्तिगत प्रेषित करें। (कविता डेढ़ मिनट से पाँच मिनट) (वाचन-कौशल अभ्यास)
2. 'पर्यावरण-संरक्षण' पर या अपने द्वारा बनाई गई 'पहाड़ी चॉकलेट' पर विज्ञापन तैयार करें। (40 शब्द)
3. मित्र की नौकरी लगने पर उसे शुभकामना संदेश प्रेषित करें। (40 शब्द)
4. 'भाग्य और पुरुषार्थ' अथवा 'एआई का बढ़ता वर्चस्व' में से किसी एक विषय पर अनुच्छेद लिखिए। (120 शब्द)
5. क्षितिज के सभी पाठों से तीन-तीन बहुविकल्पीय प्रश्न-उत्तर बनाएँ।
6. पोर्टफोलिओ बनाएँ जो कि आपको साथ ही भेजा जा रहा है। (A4 साइज़ पेपर में)
7. पाठ्य-पुस्तक में विद्यमान किसी भी कवि/लेखक पर परियोजना तैयार करें।  
(कवि/लेखक का परिचय, रचनाओं के नाम व रचनाओं का संक्षिप्त परिचय, पुरस्कार, आपका कवि/लेखक के बारे में विचार, उनकी रचना पर टिप्पणी और उन कवि/लेखक का काल्पनिक साक्षात्कार व अन्य यदि कुछ आपको उचित लगे) (A4 साइज़ पेपर में)  
(कम-कम पच्चीस पृष्ठों में यह कार्य करें।)
8. अभी तक जो भी पढ़ाया गया है, उसको कम-से कम पाँच बार दोहराएँ। आते ही उसी से प्रश्न पूछे जाएँगे।
9. उत्तर भारत दर्शनीय स्थलों की जानकारी देते हुए मुंबई-स्थित अपने मित्र को पत्र लिखिए। (100 शब्द)
10. 80 शब्दों में उपलब्ध रिक्ति (राम पब्लिक स्कूल में हिंदी-अध्यापक के पद हेतु) के लिए एक स्ववृत्त (biodata) लिखिए और [shahida.Bano95@gmail.com](mailto:shahida.Bano95@gmail.com) पर प्रेषित करिए। (mail करिए)
11. कला समेकित परियोजना :- कर्नाटक का जनजीवन, भाषाओं पर पीपीटी व वीडियो (Art Integrated Project)

12. विद्यालय पत्रिका हेतु अपनी लिखी हिंदी भाषा में रचनाएँ (कविता/कहानी/लेख आदि) अवश्य लेकर आएँ। ये रचनाएँ आपकी मौलिक होनी चाहिए। टाइप की हुई या हाथ से लिखी हो सकती हैं। किसी और लेखक/ कवि की कॉपी-पेस्ट रचनाएँ स्वीकार नहीं।

आप सभी स्वस्थ रहें , मस्त रहें , खुश रहें , सीखते रहें , परेंट्स की सहायता करते रहें ।

बहुत-बहुत आशीर्वाद बेटा ।

विषयाध्यापक :- शाहिदा बानु

स्नातकोत्तर शिक्षक हिंदी



पी एम श्री केन्द्रीय विद्यालय पासीघाट  
**PM SHRI KENDRIYA VIDYALAYA  
PASIGHAT**

# पोर्टफोलियो ( PORTFOLIO )

सत्र 2022-23

नाम - .....

कक्षा - .....

अनुक्रमांक - .....



## विद्यार्थी व्यक्तिगत जानकारी STUDENT PROFILE

- (1) विद्यार्थी का नाम - .....
- (2) प्रवेशांक न - .....
- (3) कक्षा - .....
- (4) अनुक्रमांक - .....
- (5) लिंग - .....
- (6) वर्ग - .....
- (7) जन्मतिथि - .....
- (8) मोबाइल न. - .....
- (9) रक्त समूह - .....

विद्यार्थी का  
पासपोर्ट  
साइज़ फोटो

(10) भार - .....

(11) लम्बाई (सेमी) - .....

(12) आधार सं.....

## पारिवारिक सूचना :

1 पिता का नाम - .....शैक्षणिक योग्यता .....व्यवसाय .....

2 माता का नाम - .....शैक्षणिक योग्यता .....व्यवसाय .....

3 अभिभावक - - .....शैक्षणिक योग्यता .....व्यवसाय .....

4 परिवार के सदस्यों की संख्या - .....

5 भाई-बहन की संख्या - .....

6 परिवार की मासिक आय - .....

7 परिवार की आर्थिक स्थिति - APL/BPL.....

8 फ़ोन न.- .....

9 स्थाई पता -.....

## पाठशाला पूर्व स्वास्थ्य एवं विकास

1 बच्चे के जन्म के समय सामान्य/समस्या .....

2 जन्म के उपरांत कोई समस्या .....

3 आवश्यक टीकाकरण हुआ है या नहीं .....

## पाठशाला पूर्व तैयारी

1 क्या विद्यार्थी आंगनवाडी/बालवाडीगया है ? .....

2 यदि नहीं तो क्यों ? .....

3 विद्यार्थी के विषय में कोई विशेष जानकारी .....

## विद्यार्थी की अभिवृत्तियाँ -

### । विद्यार्थी की पसंद का

1 काम - .....



2 खाने की वस्तुएँ- .....

3 खेल- .....

4 घनिष्ठ मित्र - .....

5 जानवर - .....

6 विषय - .....

7 शौक - .....

8 प्रिय शिक्षक /शिक्षिका .....

9 आप घर के किस सदस्य से ज्यादा प्यार करते हैं?.....

10 किस चीज से आपको सबसे ज्यादा डर लगता है ?.....

11 जल्दी गुस्सा कब आता है ? .....

12 अपने मित्र के कौनसे गुण अच्छे लगते हैं ? .....

॥ विद्यार्थी क्या बनना चाहता है ?

.....  
.....

## **मेरा मजबूत पक्ष & कमजोरी**

**( MY STRENGTH & WEAKNESS )**

**मेरा मजबूत पक्ष**

**( MY STRENGTH )**

**मेरा कमजोर पक्ष**  
( MY WEAKNESS )

## **मेरी शैक्षिक उपलब्धि**

( MY ACADEMIC ACHIEVEMENTS )

पिछले सत्र का परीक्षा परिणाम ( 2021-22 ) :

विषय $\implies$	अंग्रेजी	हिंदी	गणित	विज्ञान	सा.विज्ञान	कंप्यूटर विज्ञान
पूर्णांक						
प्राप्तांक						
प्रतिशत						

# शैक्षिक व सहशैक्षिक गतिविधियों में मेरी उपलब्धि

( MY ACHIEVEMENT IN CURRICULAR & CO-CURRICULAR ACTIVITIES )

## उपलब्धियों का रिकॉर्ड

( RECORDS OF ACHIEVEMENT )

( आपकी अपनी उपलब्धि का गीत, ब्लॉग, फोटोग्राफ, प्रमाण-पत्र अखबार की कटिंग, यूट्यूब विडियो का यूआरएल आदि का उल्लेख करे और चिपकाये । )

**क्रम-सूची  
( INDEX )**

क्रम.सं.	शीर्षक	पृष्ठ सं.
1	विद्यार्थी व्यक्तिगत जानकारी	1
2	मेरा मजबूत और कमजोर पक्ष	3
3	मेरी शैक्षिक उपलब्धि	4
4	शैक्षिक व सहशैक्षिक गतिविधियों में उपलब्धि	4
5	उपलब्धियों का रिकॉर्ड	5
<b>हिंदी</b>		



8	साफ-सफाई	अच्छा	प्रयास	नहीं
9	गायन-वादन	हाँ	नहीं	जोर देने पर
10	चित्र बनाना	हाँ	नहीं	जोर देने पर
11	नेतृत्व क्षमता	हाँ	संतोषप्रद	नहीं
12	सृजनात्मकता	हाँ	नहीं	
13	पठन-पाठन में रूचि	हाँ	नहीं	आंशिक
14	कविता-कहानी लेखन	हाँ	नहीं	कभी-कभी
15	व्याकरणिक ज्ञान व प्रयोग	संतोषप्रद	अच्छा	उत्कृष्ट
16	शिक्षक व बड़ों का आदर	हाँ	नहीं	कभी-कभी
17	व्यवहार	उत्तम	अतिउत्तम	श्रेष्ठ
18	कक्षा में चर्चा	हाँ	नहीं	कभी-कभी
19	गृहकार्य	पूर्ण करता है	अधुरा करता है	कभी-कभी करता है
20	मनोस्थिति	अंतर्मुखी	बहिर्मुखी	
21	निर्देशों का पालन	हाँ	नहीं	कभी-कभी

क) अभिभावक बच्चे की पढाई के प्रति क्या दृष्टिकोण रखते है -

उदासीन सहयोगी नकारात्मक पता नहीं

ख) अन्य कोई विशिष्टता का उल्लेख-

.....  
.....

ग) सहशैक्षिक गतिविधियों में प्रदर्शन-

.....  
.....

घ) कार्य दिवस उपस्थिति .....

## भाषायी कौशलों सम्बन्धी विवरण -

### श्रवण कौशल-

शिक्षक द्वारा किसी भी प्रासंगिक विषय का स्पष्ट वाचन और विद्यार्थी मूल्यांकन-

1 शब्दों को समझने की सामान्य योग्यता-	उत्तम	अतिउत्तम	संतोषप्रद
2 परिचित और अपरिचित कथन को समझने की योग्यता-	उत्तम	अतिउत्तम	संतोषप्रद
3 दीर्घ कथनों की समझ और निष्कर्ष क्षमता -	उत्तम	अतिउत्तम	संतोषप्रद
4 जटिल कथनों की समझ-	उत्तम	अतिउत्तम	संतोषप्रद
5 विषय-वास्तु को सुनकर अर्थग्रहण करना	उत्तम	अतिउत्तम	संतोषप्रद
6 कविता, भाषण, वाद-विवाद आदि को ध्यानपूर्वक सुनना और अभिव्यक्ति के ढंग को समझना-	उत्तम	अतिउत्तम	संतोषप्रद

### **वाचन कौशल-**

#### **शिक्षक विद्यार्थी से भाषण, कविता, कथा या किसी भी प्रासंगिक विषय का वाचन करवायेगा-**

1 सीमित शुद्धता के साथ प्रयोग-	उत्तम	अतिउत्तम	संतोषप्रद
2 भाषण की योग्यता-	उत्तम	अतिउत्तम	संतोषप्रद
3 सस्वर कविता पाठ-	उत्तम	अतिउत्तम	संतोषप्रद
4 कहानी, नाटक, वार्तालाप आदि में पात्रानुकूल संवाद-	उत्तम	अतिउत्तम	संतोषप्रद
5 भावानुकूल संवाद वाचन-	उत्तम	अतिउत्तम	संतोषप्रद
6 उपयुक्त शैली के साथ वाचन-	उत्तम	अतिउत्तम	संतोषप्रद

### **पठन कौशल-**

#### **विद्यार्थी किसी प्रासंगिक विषय का पठन करेगा-**

1 सरसरी नजर से पाठ का केंद्रीय भाव समझना-	हाँ	आंशिक	नहीं
2 एकाग्रचितता के साथ मौन पठन-	हाँ	आंशिक	नहीं
3 तुक, लय, यति-गति, बलाघात आदि का ज्ञान –	हाँ	आंशिक	नहीं
4 पठित अंशों का परस्पर अर्थ समझना-	हाँ	आंशिक	नहीं
5 साहित्य की विभिन्न विधाओं के पठन की समझ-	हाँ	आंशिक	नहीं

### **लेखन कौशल-**

#### **विद्यार्थी द्वारा विभिन्न विषयों पर लेख-**

1 लिपि और विराम चिह्नों का उचित प्रयोग-	उत्तम	अतिउत्तम	संतोषप्रद
2 प्रभावपूर्ण भाषा और लेखन शैली –	उत्तम	अतिउत्तम	संतोषप्रद
3 सार और भावार्थ लिखना-	उत्तम	अतिउत्तम	संतोषप्रद
4 देखी हुई घटनाओं का वर्णन और प्रतिक्रिया –	उत्तम	अतिउत्तम	संतोषप्रद
5 स्वानुभूत विचार और भावना –	उत्तम	अतिउत्तम	संतोषप्रद
6 लिखने में क्रमबद्धता, मौलिकता और सृजनात्मकता-	उत्तम	अतिउत्तम	संतोषप्रद

## गृहकार्य/कक्षा-कार्य जाँच विवरण-

क्र.सं.	सन्दर्भ	हाँ	नहीं	कभी-कभी	अंक 30
1	नियमितता				
2	समयबद्धता				
3	साफ-सफाई				
4	शुद्धता				
5	रख-रखाव				
6	लिखावट और पठनीयता				

## विषय संवर्धन गतिविधियाँ ( Subject Enrichment Activities) –

विद्यार्थियों के विषय संवर्धन के लिए विभिन्न प्रकार की गतिविधियों आयोजन –

श्रवण	वाचन
लघुकथा	संवाद वाचन
कहानी	मौखिक अभिव्यक्ति
सत्य घटना	स्मरणीय घटना की प्रस्तुति
महापुरुषों की जीवनी	वाद-विवाद प्रतियोगिता
उपर्युक्त विषयों को विद्यार्थियों को सुनाकर विषय संवर्धन हेतु मूल्यांकन प्रश्न (बहुविकल्पीय प्रश्न ,लघु प्रश्न ,घटना या कहानी को दोहराना )	भाषण प्रतियोगिता

## विषय संवर्धन गतिविधियों में विद्यार्थी का प्रदर्शन –

क्र.स.	विद्यार्थी का मूल्यांकन (25 अंक)	बहुत अच्छा	अच्छा	औसत	संतोषप्रद
1	आत्मविश्वास				
2	अभिव्यक्ति				
3	धारा-प्रवाहिता				
4	विषय सम्बद्धता/सुसंगति				
5	उच्चारण				
6	हाव-भाव				
7	आवाज				
8	शब्दावली ज्ञान				
9	व्याकरणिक ज्ञान				
10	पारस्परिक विचार-विमर्श				



## छात्र प्रगति पत्र-

विषय	सामयिक परीक्षा-1 40 अंक	अर्द्धवार्षिक परीक्षा 80 अंक	सामयिक परीक्षा-2 40 अंक	प्रीबोर्ड/वार्षिक परीक्षा 80 अंक
हिंदी				

क्रमांक	मासिक प्रगति-पत्र	पूर्णांक	प्राप्तांक	शिक्षक टिपण्णी
1	अप्रैल			
2	मई			
3	जून			
4	जुलाई			
5	अगस्त			
6	सितम्बर			
7	अक्टूबर			
8	नवंबर			
9	दिसम्बर			
10	जनवरी			
11	फरवरी			
12	मार्च			

**PM SHRI KENDRIYA VIDYALAYA PASIGHAT  
SUMMER VACATION HOLIDAY HOMEWORK  
SUBJECT ART**

**CLASS I to V**

1. Make a card decoration 2D. Topic for card- Mother Day ( only use in primary and secondary colour paper and thought writing)
2. Make a paper mask 2D. Topic for the mask (Animal)
  - Lion
  - Elephant
  - Tiger

**Class VI to VIII**

1. Make atleast 4 different types of Rangoli/ Alpona designs in your drawing book ( using geometric concepts of designs)
2. Make atleast 4 different types of card for 15 August(INDEPENDENCE DAY).

**CLASS IX to XII**

1. Make two painting A3 size drawing sheets. Topic for the painting international yoga day with slogan  
Any tribal painting from India
2. Make two Mandala Painting A3 size drawing sheets.(One black and white and one colourful)