

Guru Amar Dass Public School, Goindwal Road, Kapurthala

Grade :X

Summer Holidays' Homework

Session 2025-26



Important Instructions

- Neatness and presentation are common parameters for most of the activities assigned. Please maintain the quality of work done.
- Holiday's homework will be assessed on certain parameters and marks/grade will be awarded accordingly.
- To score well in your upcoming exams strike a balance between your leisure time and studies.
- Marks of Holidays Homework will be added in your Mid-Term Examination.

BE A WONDERFUL HUMAN BEING: KEEP IN MIND TO

- Do the homework independently, only ask for assistance from your parents or guardians
- Remember to have a wide mouth container filled with water outside your house for the birds to get respite from the scorching heat.
- Pray to almighty daily and thank for the blissful life that you enjoy.
- Be a helping hand to your parents and learn the skill of shared responsibility.
- Do the work by following the guidelines given with each work or activity
- Spend time with your parents and grandparents, their rich experience will help you overcome challenges with ease.

HEALTHY LIFESTYLE BE YOUR PRIORITY

- Give prime importance to your health. Eat lots of fruits, do exercise and get into yoga
- Pledge for "Eat Right -Less Sugar, Less Oil and Less Salt"
- Wash hands frequently, especially before and after meal.
- Avoid sharing of towel, handkerchief, brush with others.
- Drink plenty of water.

REQUEST TO PARENTS

- Summer vacation time is an opportunity to spend the quality time with your child and make him/her feel special of his unique identity.

So just spare sometime and do the following:

- Talk about Omni presence of **God** and humility being developed with regular prayers and doing good deeds as to offer best prayer to the God. Take them some religious places.
- Let them feed the poor and share things with needy people with love, let them enjoy the **Art of Giving**.
- Talk about the importance of parents and elders.

ENGLISH

- ❖ Solve all case based factual passages
- ❖ Complete grammar topics such as gap filling, editing, omission, reporter speech, and dialogue competition given in your Evergreen Practice Paper.
- ❖ Write the letters (test assignment given in your Evergreen Practice Paper.
- ❖ Complete all the extracts of PT-I syllabus.

Letter writing

- You are Naresh / Nandini of Safdarjung, New Delhi. You are deeply saddened by the attacks on elderly persons who live alone. Write a letter to the editor of 'The New India News' making people aware of the authorities to guarantee that such attacks do not occur.
- Letter to the Editor to highlight the importance of proper garbage disposal with an aim to create awareness among the city residents. Write a letter regarding the same to the editor of a local daily Hindustan Times. You are Rubal of Shakti Nagar, Delhi.
- A newspaper report on a recent terrorist attack in your locality shattered you. You decided to write an article in a local daily on terrorist attacks and the need to maintain peace and harmony in society. Write the article in 125-150 words. You are Madhav/ Meena.
- Analytical Paragraph : Solve first 5 analytical paragraphs (Evergreen Practice Paper)

SOCIAL SCIENCE

1. Make a project on anyone of the following (12-15 pages):-

1. Social issues
2. Sustainable Development.
3. Consumer Rights

- ★ Make timeline of Chapter – 1 (History) The Rise of Nationalism in Europe.
- ★ Make a flowchart on Classification of resources. (Poster)
- ★ Read the newspaper daily and find out the news based on sports and politics, afterwards paste them on scrapbook (at least 20).

2. Fill these in political map of India:-

- a) Cotton textile Industries : Mumbai, Indore, Surat, Kanpur, Coimbatore.
- b) Iron and steel Industries : Durgapur, Bokaro, Jamshedpur, Bhilai, Vijaynagar, Salem.
- c) Software Technology Parks : Noida, Gandhinagar, Mumbai, Pune, Hyderabad, Bengaluru, Chennai, Thiruvananthapuram.

3. Make a flow chart for these questions:-

- a) Unification of Italy.
- b) Features of Federalism.
- c) Causes of land degradation.
- d) Forms of power sharing.
- e) Compare 3 sectors of Indian Economy.

4. Write geographical climate conditions and distribution of these crops of food crops cash crops and beverages :-

- a) Temperature
- b) Rainfall
- c) Soil
- d) Sunlight
- e) Agriculture reason
- f) Special feature

5. Write importance and distribution of ferrous and non-ferrous minerals (Hint ch – 5 Minerals)

6. Revise the whole syllabus which has been covered till May, 2025.

Mathematics

Models:-

- 1. Properties of circle.**
- 2. Types of polynomial.**

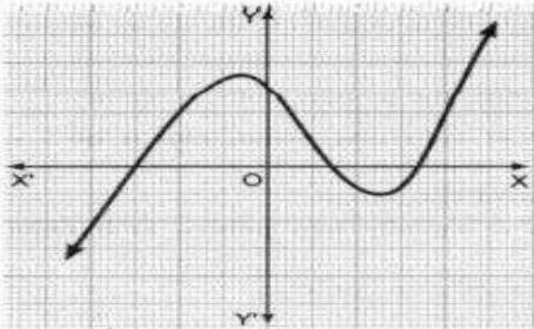
CHAPTER 1 : REAL NUMBERS

S.No.	QUESTIONS
1	The prime factorisation of natural number 288 is: (a) $2^5 \times 3^2$ (b) $2^4 \times 3^2$ (c) $2^5 \times 3^5$ (d) $2^5 \times 3^3$
2	If the HCF of 360 and 64 is 8, then their LCM is: (a) 2880 (b) 2530 (c) 672 (d) 2780
3	If two positive integers A and B can be expressed as $A = xy^3$ and $B = x^4y^2z$; x, y being prime numbers then HCF (A, B) is : (a) x^4y^3 (b) x^4y^2z (c) xy^2z (d) xy^2
4	The LCM of two numbers is 1200. Which of the following cannot be their HCF? (a) 600 (b) 500 (c) 400 (d) 200
5	If $\text{HCF}(26, 169) = 13$, then $\text{LCM}(26, 169) = ?$ (a) 26 (b) 52 (c) 338 (d) 13
6	An army contingent of 616 members is to march behind an army band of 32 members in a parade. The two groups are to march in the same number of columns. What is the maximum number of columns in which they can march? (a) 5 (b) 6 (c) 7 (d) 8
7	The HCF and LCM of 12, 21, 15 respectively are : (a) 3, 420 (b) 3, 515 (c) 4, 420 (d) 4, 525
8	The ratio of LCM and HCF of the least composite number and the least prime number is : (a) 3:2 (b) 2:7 (c) 2:1 (d) 1:2
9	If $\text{LCM}(x, 18) = 36$ and $\text{HCF}(x, 18) = 2$, then $x =$ (a) 2 (b) 3 (c) 4 (d) 6
10	If $(a \times 5)^n$ ends with the digit zero for every natural number n , then a is (a) a prime number (b) an even number (c) an odd number (d) none of these
11	There are 312, 260 and 156 students in class X, XI and XII respectively. Buses are to be hired to take these students to a picnic. Find the maximum number of students who can sit in a bus if each bus takes equal number of students: (a) 34 (b) 52 (c) 48 (d) 63

12	Three bells ring at intervals of 4, 7 and 14 minutes. All the three rang at 7 AM. When will they ring together again? (a) 7:28 AM (b) 7:54 AM (c) 7:32 AM (d) 7:40 AM
13	The product of a non-zero rational number and an irrational number is (a) always rational (b) always irrational (c) rational or irrational (d) always one
14	The smallest irrational number by which $\sqrt{18}$ should be multiplied so as to get a rational number is (a) $\sqrt{3}$ (b) 2 (c) $\sqrt{2}$ (d) $\sqrt{18}$
15	If two positive integers a and b are written as $a = p^3q^2$ and $b = pq^3$; p, q are prime numbers, then HCF (a, b) is: (a) pq^2 (b) pq (c) p^3q^3 (d) p^2q^2
16	Assertion: The H.C.F. of two numbers is 16 and their product is 3072. Then their L.C.M. = 162. Reason: If a and b are two positive integers, then $\text{H.C.F.} \times \text{L.C.M.} = a \times b$.
17	Assertion: '2' is an example of a rational number. Reason: The square roots of all positive integers are irrational numbers.
18	Assertion: If the HCF of two numbers is 5 and their product is 150, then their LCM is 30. Reason: For any two positive integers p and q, $\text{HCF}(p, q) \times \text{LCM}(p, q) = p \times q$
19	Assertion: (18, 25) is a pair of co-primes. Reason: Pair of co-prime has a common factor 2.
20	Assertion: $\sqrt{x}$ is an irrational number, where x is a prime number. Reason: Square root of any prime number is an irrational number.

CHAPTER 2 - POLYNOMIALS

SN	MULTIPLE CHOICE QUESTIONS (MCQ- 30 QUESTIONS)
1	Which of the following is not a polynomial? (a) $\sqrt{3}x^3 - 2x - \sqrt{3}$ (b) $x + \frac{1}{x}$ (c) $7x^2 + 5x - \sqrt{2}$ (d) 5
2	Which are the zeroes of $p(x) = 6x^2 - 7x - 3$ (a) 5, -2 (b) -5, 2 (c) -5, -2 (d) none of these

3	The number of zeroes of the polynomial from the graph is (a) 0 (b) 1 (c) 2 (d) 3 
4	Find the quadratic polynomial whose zeros are -3 and 4. (a) $x^2 - 7x - 12$ (b) $x^2 + x + 12$ (c) $x^2 - x - 12$. (d) $x^2 + 3x - 4$
5	Which are the zeroes of $p(x) = x^2 - 8x + 15$ (a) 5, -2 (b) -5, 2 (c) 5, 3 (d) none of these
6	Find the sum and product of the zeroes of polynomial $x^2 - 3x + 5$ (a) -3, 5 (b) 2, 5 (c) 3, 5 (d) -3, 2
7	If one of the zeroes of quadratic polynomial $(k+3)x^2 + 2kx + 6$ is -3, then find value of k. (a) 10 (b) -11 (c) 11 (d) 13
8	A quadratic polynomial whose sum and product of zeroes are -5 and 6 is (a) $x^2 - 5x - 6$ (b) $x^2 + 5x - 6$ (c) $x^2 + 5x + 6$ (d) none of the above.
9	If the product of the zeroes of the quadratic polynomial $3x^2 + 5x + k$ is $-\frac{2}{3}$, then the value of k is (a) -3 (b) -2 (c) 2 (d) 3
10	If one zero of the polynomial $6x^2 + 37x - (k - 2)$ is reciprocal of the other, then, what is the value of k? (a) 4 (b) -6 (c) 6 (d) -4
11	The zeroes of the polynomial $p(x) = x^2 + 4x + 3$ are given by (a) 1, 3 (b) -1, 3 (c) 1, -3 (d) -1, -3
12	If α and β are the zeroes of the polynomial $f(x) = px^2 - 2x + 3p$ and $\alpha + \beta = \alpha\beta$ then the value of p (a) $-\frac{2}{3}$ (b) $\frac{2}{3}$ (c) $\frac{1}{3}$ (d) $-\frac{1}{3}$

13	The zeroes of the quadratic polynomial $f(x) = x^2 + 99x + 127$ are (a) both negative (b) both positive (c) both equal (d) none
14	The maximum number of zeroes a cubic polynomial can have, is (a) 1 (b) 4 (c) 2 (d) 3
15	If α and β are the zeroes of the polynomial $f(x) = x^2 - ax - b$, then the value of $\alpha^2 + \beta^2$ is (a) $a^2 - 2b$ (b) $a^2 + 2b$ (c) $a^2 - b$ (d) $a^2 + b$
16	Statement-1 (A): The polynomial $f(x) = x^2 - 2x + 2$ has two real zeros. Statement-2 (R): A quadratic polynomial can have at most two real zeroes.
17	Statement-1 (A): A quadratic polynomial having $\frac{1}{2}$ and $\frac{1}{3}$ as its zeroes is $6x^2 - 5x + 1$ Statement-2 (R): Quadratic polynomial having α and β as zeroes are given by $f(x) = k\{x^2 - (\alpha + \beta)x + \alpha\beta\}$ where k is a non-zero constant.
18	Statement-1 (A): If one root of the quadratic polynomial $f(x) = (k-1)x^2 - 10x + 3$, $k \neq 1$ is reciprocal of the other, then $k = 4$ Statement-2 (R): The product of roots of the quadratic polynomial $ax^2 + bx + c$, $a \neq 0$ is $\frac{a}{c}$
19	Statement-1 (A): If α and β are zeroes of the quadratic polynomial $x^2 + 7x + 12$, then $\frac{12}{\alpha} + \frac{12}{\beta} - 12\alpha\beta = 395$ Statement-2(R): If α and β are zeroes of the quadratic polynomial $ax^2 + bx + c$, then $\alpha + \beta = -\frac{b}{a}$ and $\alpha\beta = \frac{c}{a}$
20	Statement-1 (A): If α , β and Y are zeroes of the polynomial $6x^3 + 3x^2 - 5x + 1$, then $\alpha^{-1} + \beta^{-1} + Y^{-1} = 5$ Statement-2(R): If α , β and Y are zeroes of the cubic polynomial $ax^3 + bx^2 + cx + d$, then $\alpha + \beta + Y = -\frac{b}{a}$

CHAPTER: - 3 PAIR OF LINEAR EQUATION IN TWO VARIABLES

Q1.	The value of K for which the system of equation $kx - y = 2$, and $6x - 2y = 3$ has a unique solution is.		
(A)	Not equal to 3	(B)	Not equal to (-3)
(C)	Not equal to 0	(D)	Not equal to (1)
Q2.	If the system of equations $kx - 5y = 2$ and $4x + my = 10$ has infinitely many solution then the value of k and m are.		
(A)	$k = \frac{4}{5}$ and $m = -25$	(B)	$k = \frac{5}{4}$ and $m = -25$
(C)	$k = \frac{5}{4}$ and $m = 25$	(D)	$k = \frac{-5}{4}$ and $m = 25$
Q3.	8 chairs and 5 tables cost Rs 10,500, while 5 chairs and 3 tables cost Rs 6,450. The cost of each chair will be.		
(A)	750	(B)	600
(C)	850	(D)	900
Q4.	The pair of linear equation $3x + 5y = 3$ and $6x + ky = 8$ do not have a solution, if k is		
(A)	5	(B)	10
(C)	15	(D)	20
Q5.	The pair of equation $x = a$ and $y = b$ graphically represents the lines which are.		
(A)	Parallel lines	(B)	Intersecting at (a, b)
(C)	Coincident lines	(D)	Intersecting at (b, a)
Q6.	The value of c for which the pair of equation $cx - y = 2$ and $6x - 2y = 3$ will have no solution.		
(A)	3	(B)	-3
(C)	-12	(D)	No value
Q7.	The pair of equation $5x - 15y = 8$ and $3x - 9y = \frac{24}{3}$ has.		
(A)	Infinite solution	(B)	Unique solution
(C)	No solution	(D)	Two solution
Q8.	$19x - 17y = 55$ and $17x - 19y = 53$ then the value of $(x - y)$ is.		
(A)	$\frac{1}{3}$	(B)	-3
(C)	3	(D)	5

Q9.	If $bx + ay = a^2 + b^2$ and $ax - by = 0$, then the value of $(x - y)$.		
(A)	$a - b$	(B)	$b - a$
(C)	$a^2 - b^2$	(D)	$b^2 + a^2$
Q10.	If $2x + 3y = 0$ and $4x - 3y = 0$ then the value of $(x + y)$ is .		
(A)	0	(B)	-1
(C)	1	(D)	2
Q11.	If $(6, k)$ is a solution of equation $3x + y - 22 = 0$ then the value of k is.		
(A)	4	(B)	- 4
(C)	3	(D)	- 3
Q12.	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 years, of the son and the father are, respectively.		
(A)	4 and 24	(B)	5 and 30
(C)	6 and 36	(D)	3 and 24
Q13.	Aruna has only Re 1 and Rs 2 coins with her. If the total number of coins that she has is 50 and the amount of money with her is Rs 75, then the number of Re 1 and Rs 2 coins are, respectively.		
(A)	35 and 15	(B)	35 and 20
(C)	15 and 35	(D)	25 and 25
Q14.	The sum of the digits of a two digit number is 9. If 27 is added to it, the digits of the numbers get reversed. The number is.		
(A)	36	(B)	72
(C)	63	(D)	25
Q15.	If $x = a$, $y = b$ 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

CHAPTER 4: QUADRATIC EQUATIONS

1	Which one of the following is not a quadratic equation?			
	(a) $(x + 2)^2 = 2(x + 3)$		(b) $x^2 + 3x = (-1)(1 - 3x)^2$	
	(c) $(x + 2)(x - 1) = x^2 - 2x - 3$		(d) $x^3 - x^2 + 2x + 1 = (x + 1)^3$	
2	Which of the following equations has 2 as a root?			
	(a) $x^2 - 4x + 5 = 0$		(b) $x^2 + 3x - 12 = 0$	
	(c) $2x^2 - 7x + 6 = 0$		(d) $3x^2 - 6x - 2 = 0$	
3	If $\frac{1}{2}$ is a root of the equation $x^2 + kx - \frac{5}{4} = 0$, then the value of k is			
	(a) 2	(b) -2	(c) $\frac{1}{4}$	(d) $\frac{1}{2}$
4	Which of the following equations has the sum of its roots as 3?			
	(a) $2x^2 - 3x + 6 = 0$		(b) $-x^2 + 3x - 3 = 0$	
	(c) $\sqrt{2}x^2 - \frac{3}{\sqrt{2}}x + 1 = 0$		(d) $3x^2 - 3x + 3 = 0$	
5	Values of k for which the quadratic equation $2x^2 - kx + k = 0$ has equal roots is			
	(a) 0 Only	(b) 4 Only	(c) 8 Only	(d) 0 and 8
6	The quadratic equation $2x^2 - \sqrt{5}x + 1 = 0$ has			
	(a) two distinct real roots		(b) two equal real roots	
	(c) no real roots		(d) more than 2 real roots	
7	Which of the following equations has two distinct real roots?			
	(a) $2x^2 - 3\sqrt{2}x + \frac{9}{4} = 0$		(b) $x^2 + x - 5 = 0$	
	(c) $x^2 + 3x + 2\sqrt{2} = 0$		(d) $5x^2 - 3x + 1 = 0$	
8	Which of the following equations has no real roots?			
	(a) $x^2 - 4x + 3\sqrt{2} = 0$		(b) $x^2 + 4x - 3\sqrt{2} = 0$	
	(c) $x^2 - 4x - 3\sqrt{2} = 0$		(d) $3x^2 + 4\sqrt{3}x + 4 = 0$	

9	The discriminant of the quadratic equation $3\sqrt{3}x^2 + 10x + \sqrt{3} = 0$ is			
	(a) 8	(b) 64	(c) $\frac{-1}{3\sqrt{3}}$	(d) $-\sqrt{3}$
10	A sum of ₹4000 was divided among x persons. Had there been 10 more persons, each would have got ₹80 less. Which of the following represents the above situation?			
	(a) $x^2 + 10x - 500 = 0$		(b) $8x^2 + 10x - 400 = 0$	
	(c) $x^2 + 10x + 500 = 0$		(d) $8x^2 + 10x + 400 = 0$	
11	The product of two consecutive integers is equal to 6 times the sum of the two integers. If the smaller integer is x, which of the following equations represent the above situation?			
	(a) $x^2 + 11x + 6 = 0$		(b) $x^2 - 11x - 6 = 0$	
	(c) $x^2 + 11x - 6 = 0$		(d) $x^2 - 11x + 6 = 0$	
12	Consider the equation $kx^2 + 2x = c(2x^2 + b)$ For the equation to be quadratic, which of these cannot be the value of k?			
	(a) c	(b) 2c	(c) 3c	(d) $2c + 2b$
13	What is the smallest positive integer value of k such that the roots of the equation $x^2 - 9x + 18 + k = 0$ can be calculated by factoring the equation?			
	(a) 1	(b) 2	(c) 3	(d) 4
14	Rahul follows the below steps to find the roots of the equation $3x^2 - 11x - 20 = 0$, by splitting the middle term. Step 1: $3x^2 - 11x - 20 = 0$ Step 2: $3x^2 - 15x + 4x - 20 = 0$ Step 3: $3x(x - 5) + 4(x - 5) = 0$ Step 4: $(3x - 4)(x - 5) = 0$ Step 5: $x = \frac{4}{3}$ and 5 In which step did Rahul make the first error?			
	(a) Step 2	(b) Step 3	(c) Step 4	(d) Step 5
15	The roots of $ax^2 + bx + c = 0$, $a \neq 0$ are real and unequal. Which of these is true about the value of discriminant, D?			
	(a) $D < 0$	(b) $D > 0$	(c) $D = 0$	(d) $D \leq 0$

16	Assertion(A): If one root of the quadratic equation $6x^2 - x - k = 0$ is $\frac{2}{3}$, then the value of k is 2. Reason(R): The quadratic equation $ax^2 + bx + c = 0$, $a \neq 0$ has almost two roots.
17	Assertion(A): The roots of the quadratic equation $x^2 + 2x + 2 = 0$ are real Reason(R): If discriminant $D = b^2 - 4ac < 0$ then the roots of quadratic equation $ax^2 + bx + c = 0$ are not real.
18	Assertion: $(2x - 1)^2 - 4x^2 + 5 = 0$ is not a quadratic equation. Reason: An equation of the form $ax^2 + bx + c = 0$, ($a \neq 0$, where a, b and c are real numbers) is called a quadratic equation.
19	Assertion: $3x^2 - 6x + 3 = 0$ has equal real roots. Reason: The quadratic equation $ax^2 + bx + c = 0$ have equal real roots if discriminant $D > 0$.
20	Assertion(A): The equation $9x^2 + 3kx + 4 = 0$ has equal roots for $k = 9$. Reason (R): If discriminant 'D' of a quadratic equation is equal to zero, then roots of equation are real and equal.

CHAPTER:-5

ARITHMETIC PROGRESSION

Q1.	The 10th term of the AP: 5, 8, 11, 14, ... is		
(A)	32	(B)	35
(C)	38	(D)	185
Q2.	In an AP, if $d = -4$, $n = 7$, $a_n = 4$, then a is		
(A)	6	(B)	7
(C)	20	(D)	28
Q3.	The list of numbers $-10, -6, -2, 2, \dots$ is		
(A)	An AP with $d = -16$	(B)	An AP with $d = 4$
(C)	An AP with $d = -4$	(D)	Not an AP

Q4.	The first four terms of an AP, whose first term is -2 and the common difference is -2 , are		
(A)	$-2, 0, 2, 4$	(B)	$-2, 4, -8, 16$
(C)	$-2, -4, -6, -8$	(D)	$-2, -4, -8, -16$
Q5.	If the 2nd term of an AP is 13 and the 5th term is 25, what is its 7th term?		
(A)	30	(B)	33
(C)	37	(D)	38
Q6.	If 7 times the 7th term of an AP is equal to 11 times its 11th term, then its 18th term will be		
(A)	0	(B)	1
(C)	2	(D)	3
Q7.	If the first term of an AP is -5 and the common difference is 2, then the sum of the first 6 terms is		
(A)	1	(B)	-1
(C)	0	(D)	2
Q8.	The sum of first 100 multiples of 3 is		
(A)	15130	(B)	15100
(C)	15120	(D)	15150
Q9.	In an AP if $a = -7.2$, $d = 3.6$, $a_n = 7.2$, then n is		
(A)	-5	(B)	5
(C)	4	(D)	7
Q10.	In an AP, if $a = 3.5$, $d = 0$, $n = 101$, then a_n will be		
(A)	3.5	(B)	5.5
(C)	4.5	(D)	6.5
Q11.	The 11th term of the AP: $-5, -5/2, 0, 5/2, \dots$ is		
(A)	-20	(B)	20
(C)	10	(D)	-10
Q12.	What is the common difference of an AP in which $a_{18} - a_{14} = 32$?		
(A)	-8	(B)	5
(C)	8	(D)	-5

Q13.	Two APs have the same common difference. The first term of one of these is -1 and that of the other is -8 . Then the difference between their 4th terms is		
(A)	7	(B)	8
(C)	9	(D)	10
Q14.	The sum of last ten terms of the AP: 8, 10, 12,---, 126.is		
(A)	1170	(B)	1250
(C)	1120	(D)	1130
Q15.	If 7 times the 7th term of an AP is equal to 11 times its 11th term, then its 18th term will be		
(A)	-1	(B)	0
(C)	2	(D)	1

CHAPTER-7 CO-ORDINATE GEOMETRY

S.No.	MCQ QUESTIONS
1	The distance of a point P(x,y) from the origin is (A) $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ (B) $\sqrt{(x_2 - x_1) + (y_2 - y_1)}$ (C) $\sqrt{x + y}$ (D) $\sqrt{x^2 + y^2}$
2	The points on y-axis, whose ordinate is 3 and Q is a point (-5,2), then the distance PQ is a. $\sqrt{26}$ units b. $\sqrt{24}$ units c. 5 units d. $\sqrt{65}$ units
3	The point on the x-axis which is equidistant from points (-1,0) and (5,0) is a. (0,2) b. (2,0) c. (3,0) d. (0,3)

4	The distance between A(1,3) and B(x,7) is 5. The possible values of x are a. 4,-2 b. 2,4 c. 3,2 d. 2,5
5	The perpendicular distance of A(5,12) from the y-axis is a. 13 units b. 5 units c. 12 units d. 17 units
6	The perimeter of a triangle with vertices (0,4), (0,0) and (3,0) a. 8 b. 10 c. 12 d. 15
7	The coordinates of a point A, where AB is the diameter of a circle, whose centre is (2,-3) and B(1,4) is: a. (10,3) b. (3,-10) c. (-3,10) d. (-3,-10)
8	If the points P(7,3), Q(9,4), R(8,k) and S(6,1) taken in order, are the vertices of the rectangle, then the value of k is: a. -2 b. 2 c. 3 d. -4

9	The number of points on x-axis which are at a distance k, where $k=5$, from the point (2,3) are a. No point b. Infinite point c. 2 points d. 1 point
10	The points (-5, 1), (1, p) and (4, -2) are collinear if the value of p is (a) 3 (b) 2 (c) 1 (d) -1
11	The area of the triangle ABC with the vertices A(-5, 7), B(-4, -5) and C(4, 5) is (a) 63 (b) 35 (c) 53 (d) 36
12	The line segment joining the points (3, -1) and (-6, 5) is trisected. The coordinates of point of trisection are (a) (3, 3) (b) (-3, 3) (c) (3, -3) (d) (-3, -3)
13	The points (-1, -2), (1, 0), (-1, 2), (-3, 0) form a quadrilateral of type: (a) Square (b) Rectangle (c) Parallelogram (d) Rhombus
14	If the distance between the points A(2, -2) and B(-1, x) is equal to 5, then the value of x is: (a) 2 (b) -2 (c) 1 (d) -1
15	The distance of point A(2, 4) from the x-axis is (a) 2 units (b) 4 units (c) -2 units (d) -4 units

CHAPTER 11 – AREA RELATED TO CIRCLES

Q1.	Perimeter of sector of a circle having angle 90° and radius 14 cm is		
(A)	11cm	(B)	22cm
(C)	154cm	(D)	50cm
Q2.	Ratio of area of circle to area of square whose length of side is equal to the radius of circle is		
(A)	22:7	(B)	1:1
(C)	11:2	(D)	44:49

Q3.	Area of clock swept by minute hand of diameter 42 cm from 12.00 to 3.00 is		
(A)	693 cm ²	(B)	346.5 cm ²
(C)	1386 cm ²	(D)	5544 cm ²
Q4.	Find the diameter of circle whose area is equal to the sum of the areas of the two circles of diameters 20cm and 48cm.		
(A)	48cm	(B)	26cm
(C)	52cm	(D)	56cm
Q5.	Find the area of corresponding major sector of a circle of radius 14cm and central angle 90°.		
(A)	280 cm ²	(B)	616 cm ²
(C)	308 cm ²	(D)	462 cm ²
Q6.	Find the area of the sector of a circle of radius 5cm, if the corresponding length of arc is 3.5cm		
(A)	17.5 cm ²	(B)	35 cm ²
(C)	7.5 cm ²	(D)	8.75 cm ²
Q7.	A chord AB of a circle of radius 10cm subtends an angle of 60° at the centre of the circle. The area of minor segment is		
(A)	9.08 cm ²	(B)	8.08 cm ²
(C)	304.2 cm ²	(D)	None of the above
Q8.	If the length of a circle subtending and angle of 60° is 22 cm then the radius of circle is		
(A)	22 cm	(B)	20 cm
(C)	21cm	(D)	None of the above
Q9.	The perimeter of a certain sector of a circle of radius 6.5 cm is 31cm. Then the area of sector will be		
(A)	48.5 cm ²	(B)	54.33 cm ²
(C)	58.5 cm ²	(D)	None of the above

Q10.	The diameter of wheel is 63cm. How many revolutions will it make to cover 792m?		
(A)	200	(B)	300
(C)	400	(D)	350
Q11.	If the sum of the circumference of two circles with radius r_1 and r_2 is equal to the circumference of a circle of radius R then		
(A)	$R = r_1 + r_2$	(B)	$R < r_1 + r_2$
(C)	$R > r_1 + r_2$	(D)	None of the above
Q12.	If the circumference of the circle and perimeter of square are equal then		
(A)	Area of Circle = Area of Square	(B)	Area of Circle > Area of Square
(C)	Area of Circle < Area of Square	(D)	Nothing definite can be said about The relationship between The areas of the circle and the square.
Q13.	The circumferences of two concentric circles forming a ring are 88 cm and 66 cm respectively the width of the ring is		
(A)	14cm	(B)	3.5cm
(C)	7cm	(D)	21cm
Q14.	The radius of a circle is 50cm if the radius is decreased by 50% its area will be decreased by		
(A)	50%	(B)	75%
(C)	25%	(D)	80%
Q15.	If the circumference of two circles are in the ratio 4:9 then the ratio of their area will be		
(A)	16:81	(B)	8 : 18
(C)	4 : 9	(D)	4 : 81

CHAPTER 13- STATISTICS

1. The mean of the observations given by:
- (a) Sum of observations/Total number of observations
(b) Total number of observations/Sum of observations
(c) Sum of observations +Total number of observations
(d) None of the above
2. If the mean of frequency distribution is 7.5 and $\sum f_i x_i = 120 + 3k$, $\sum f_i = 30$, then k is equal to:
- (a) 40 (b) 35 (c) 50 (d) 45
3. The median of first seven prime numbers is:
- (a) 3 (b) 5 (c) 7 (d) 11
4. The mean of the data: 4, 10, 5, 9, 12 is;
- (a) 8 (b) 10 (c) 9 (d) 15
5. The median of the data 13, 15, 16, 17, 19, 20 is:
- (a) 30/2 (b) 31/2 (c) 33/2 (d) 35/2
6. If the mean of first n natural numbers is $3n/5$, then the value of n is:
- (a) 3 (b) 4 (c) 5 (d) 6
7. The mean of first five whole numbers is:
- (a) 2 (b) 3 (c) 4 (d) 5
8. If mean of a, a+3, a+6, a+9 and a+12 is 10, then a is equal to;
- (a) 1 (b) 2 (c) 3 (d) 4
9. The class interval of a given observation is 10 to 15, then the class mark for this interval will be:
- (a) 11.5 (b) 12.5 (c) 12 (d) 14
10. If the sum of frequencies is 24, then the value of x in the observation: x, 5,6,1,2, will be;
- (a) 4 (b) 6 (c) 8 (d) 10
11. The mean of following distribution is:
- | | | | | |
|-------|----|----|----|----|
| X_i | 11 | 14 | 17 | 20 |
| F_i | 3 | 6 | 9 | 7 |
- (a) 15.6 (b) 17 (c) 14.8 (d) 16.4
12. Construction of a cumulative frequency table is useful in determining the
- (a) mean (b) median (c) mode (d) all the above three measures

13. While computing mean of grouped data, we assume that the frequencies are

- (a) centred at the class marks of the classes (b) evenly distributed over all the classes
(c) centred at the upper limits of the classes (d) centred at the lower limits of the classes

14. Consider the following frequency distribution of the heights of 60 students of a class:

Height (in cm)	150 – 155	155 – 160	160 – 165	165 – 170	170 – 175	175 – 180
Number of students	15	13	10	8	9	5

The sum of the lower limit of the modal class and upper limit of the median class is

- (a) 310 (b) 315 (c) 320 (d) 330

15. Consider the following frequency distribution:

Class	0 – 5	6 – 11	12 – 17	18 – 23	24 – 29
Frequency	13	10	15	8	11

The upper limit of the median class is

- (a) 17 (b) 17.5 (c) 18 (d) 18.5

* Lab Manual Activities:-

1. Algebra

1.1 Quadratic Polynomials

To draw the graph of a quadratic polynomial and observe:

- (i) the shape of the curve when the coefficient of x^2 is positive:
(ii) the shape of the curve when the coefficient of x^2 is negative:
(iii) its number of zeroes.

1.2 System of Linear Equations

To obtain the conditions:

To obtain the conditions for consistency (or inconsistency) of a system of linear equations in two variables by graphical method from three different pairs.

1.3 Quadratic Equations

To obtain the solution of a quadratic equation ($x+4x60$) by completing the square method geometrically.

1.4 Arithmetic Progression (A.P.) – 1

To figure out whether the given sequence is an arithmetic progression or not, by paper cutting and pasting method.

- (a) 1,5,9,13,17,... (b) 1,3,6,7,11,13,...

1.5 Arithmetic Progression (A.P.)-II

To find the sum of the first odd natural numbers.

1.6 Arithmetic Progression (A.P.)-III

To verify that the sum of first natural numbers is $\frac{n(n+1)}{2}$,

i.e., $1+2+3+\dots + n = \sum n = \frac{n(n+1)}{2}$, experimentally.

2. Coordinate Geometry

2.1 Section formula

To verify section formula using graphical method.

3. Geometry

3.4 Tangents drawn from an external point.

To verify that the lengths of tangents drawn from an external point to a circle are equal, using the method of paper folding.

5. Mensuration

5.2 Area of Sectors formed at the vertices of a triangle

To verify that the sum of areas of three sectors of the same radii 'r' formed at the vertices of any triangle is $\frac{nr^2}{2}$ by paper cutting and pasting method.

5.3 Surface area of a cylinder

To obtain the formulae for the curved surface area and the total surface area of a right circular cylinder in terms of the radius (r) of its base and height (h).

5.4 Volume of a right circular cylinder

To obtain the formula for the volume of a right circular cylinder in terms of its height and radius of the circular base.

5.5 Right circular cone

To make a right circular cone of given slant height, l and circumference of the base, $2\pi r$.

5.6 Surface area of a cone

To obtain the formula for the curved surface area of a right circular cone by paper cutting and pasting method.

5.7 Volume of a cone

To obtain the formula for the volume of a right circular cone.

5.8 Surface area of a sphere

To obtain the formula for the surface area of a sphere in terms of its radius.

6. Statistics and Probability

6.1 Median

To find the median marks obtained by students of your class in a Career Aptitude Test, graphically.

PUNJABI

1. ਪੁਰਾਤਨ ਸੱਭਿਆਚਾਰ ਬਾਰੇ ਜਾਣਕਾਰੀ ਇੱਕਠੀ ਕਰਕੇ ਇੱਕ ਫਾਈਲ ਤਿਆਰ ਕਰੋ।

2. ਪੰਜਾਬ ਦੇ ਤਿਉਹਾਰਾਂ ਸੰਬੰਧੀ ਜਾਣਕਾਰੀ ਇੱਕਠੀ ਕਰਕੇ ਇੱਕ ਫਾਈਲ ਤਿਆਰ ਕਰੋ।

ਪਾਠ ਪੁਸਤਕਾਂ (ਸਾਹਿਤ ਮਾਲਾ, ਵੰਨਗੀ)

ਪ੍ਰਾਰਥਨਾ, ਧਰਤੀ ਹੇਠਲਾ ਬਲਦ, ਪਾਠਾਂ ਨੂੰ ਪੜ੍ਹ ਕੇ ਇਸ ਵਿੱਚੋਂ ਵੀਹ (20) ਪ੍ਰਸ਼ਨ ਉੱਤਰ ਖੁਦ ਤਿਆਰ ਕਰੋ।

(ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ 20-25 ਸ਼ਬਦਾਂ ਵਿੱਚ ਹੋਣ)

ਪੀਰਿਓਡਿਕ ਟੈਸਟ - I ਦਾ ਪਾਠਕ੍ਰਮ ਯਾਦ ਕਰੋ।

SCIENCE

Physics Worksheet

1. What is charge? What is quantisation of charge?
Two formula $Q = ne$, $Q = It$
2. Define coulomb (unit of charge)
3. Why ammeter is connected in series?
4. Why voltmeter is connected in parallel?
5. Define potential, potential difference, potential energy.
Formula $W = Vq$
6. What is Ohm's law? Write its formula.
7. What are the factors on which the Resistance depends?
8. What is resistivity?
9. Calculate equivalent resistance in series and in parallel for three resistances R_1 , R_2 and R_3 .
10. What is Joule's law of heating? Write its application.
11. What is electrical power and what is the commercial unit of power?
12. Solve the following numerical:
 - a) Calculate number of electrons in 4 coulomb of charge.
 - b) How much energy is given to each coulomb of charge passing through a 6V battery?
 - c) When a 12V battery is connected across an unknown resistor, there is a current of 2.5mA. Find the value of resistance.
 - d) 100J of heat is produced each second in 4ohm resistance. Find the potential difference.
 - e) Which uses more energy a 250W TV Set in 1 hour or 1200W toaster in 10 minutes.

Chemistry Worksheet

- Q 1.** Write a chemical equation when magnesium metal reacts with aqueous hydrochloric acid to produce a solution of magnesium chloride and hydrogen gas.
- Q 2.** Can a combination reaction be redox reaction.
- Q 3.** Why do we apply paint on iron articles?
- Q 4.** What are the different types of reactions?
- Q 5.** What is a decomposition reaction ? Give example.
- Q 6.** Why does the color of copper sulphate solution change, when an iron nail is dipped in it?
- Q 7.** Define displacement reaction.
- Q 8.** Convert the following word equation to a balanced chemical equation:
Magnesium + Oxygen $\longrightarrow$ Magnesium Oxide
- Q 9.** Write balanced chemical equations for the following word equations:
- A.** Calcium hydroxide + Carbon dioxide $\longrightarrow$ Calcium carbonate + Water
Skeletal equation: _____
Balanced equation: _____
- B.** Zinc + Silver nitrate $\longrightarrow$ Zinc nitrate + Silver
Skeletal equation: _____
Balanced equation: _____

C. Aluminium + Copper chloride $\longrightarrow$ Aluminium chloride + Copper Skeletal

Skeletal equation: _____

Balanced equation: _____

D. Potassium bromide (aq) + Barium iodide (aq) $\longrightarrow$ Potassium iodide (aq) +

Barium bromide(s)

Skeletal equation: _____

Balanced equation: _____

E. Zinc carbonate(s) $\longrightarrow$ Zinc oxide(s) + Carbon dioxide(g)

Skeletal equation: _____

Balanced equation: _____

Q10 Why is photosynthesis considered as an endothermic reaction?

Q11. Give an example of a chemical reaction characterized the change in temperature.

Q 12. What type of chemical reactions take place when:

- (a) Limestone is heating?
- (b) A magnesium wire is burnt in air?
- (c) Electricity is passed through water?
- (d) Ammonia and hydrogen chloride are mixed?
- (e) Silver bromide is exposed to sunlight?

Biology Worksheet

1. In which kind of respiration is more energy released?
 2. Define photolysis.
 3. State the role of the following in human digestive system :
 - (i) Digestive enzymes
 - (ii) Hydrochloric acid
 - (iii) Villi
 4. How are water and minerals transported in plants ?
 5. Differentiate between arteries and veins.
 6. Why do the walls of the trachea not collapse when there is less air in it?
 7. What are the final products after digestion of carbohydrates and proteins?
 8. How are the alveoli designed to maximise the exchange of gases?
 9. Name the component of blood that helps in the formation of blood clot in the event of a cut.
 10. What will happen to a plant if its xylem is removed?
 11. What is the mode of nutrition in human beings?
 12. Draw diagrams of:
 - a) Digestive system
 - b) Respiratory system
 - c) Human heart
 - d) Excretory system
 - e) Nephron
- **Complete the Lab Manual of Physics, Chemistry and Biology.**
 - **Revise whole Periodic Test- I Syllabus.**

INFORMATION TECHNOLOGY

Make a practical file of the following topics :-

❖ **UNIT – 2 : - Electronic spreadsheet (Advanced)**

1. Consolidating data
2. What if scenarios
3. Goal seek
4. Recording a Macro
5. Hyperlinks – types of Hyperlinks
6. Comparing documents

❖ **UNIT – 3 : - Database Management**

1. Data Models
2. User Interface of LibreOffice Base
3. Creating Table in Design view
4. Relationships – Type of Relationships
5. Forms control Toolbar

PAINTING

Make a painting on flower pot and decorate it with clay.

CELEBRATIONS

World Environment Day Activity

Let's nurture the nature so that we can have a better future. Hurray! its time to celebrate the World Environment Day on 5th June. Even a small change can make a huge difference to our world. Are you up for the change challenge?

Plant trees on the eve of World Environment Day. Click the photographs and send to your Form Educators



FATHERS' DAY CELEBRATION

On the account of Fathers' Day Celebration on 15 June, 2025, Make a favourite dish of your father with the help of your mother and serve it to your father. Click the photographs and short clips (in landscape mode) while performing the following activities and send to your Form Educator:-

- 1. Helping Father in his work**
- 2. Praying with father.**

INTERNATIONAL YOGA DAY

To keep you and your family members fit it's important to do yoga daily.

We celebrate **YOGA DAY** on **21st June** so on that day all the **Family members should do yoga and send the photos and videos (in landscape mode) to the Form Educator.**

