

Summer Vacation Home Work – 2026

Class - x

Ist Week	1. Express each numbers as a product of its primes 24, 36, 100, 150, 156, 225, 256, 120, 512, 1000, 900, 296, 400, 1225. 2. Find the HCF of following by Prime factorization method- (a) 10, 15, 20 (b) 20, 35, 50 (c) 45, 60 (d) 12, 15, 36 (e) 100, 120 (f) 36, 54, 81 (g) 120, 150, 180 (h) 60, 75, 90 3. Prove that : $\sqrt{2}$ is an irrational number. 4. Prove that : $\sqrt{3}$ is an irrational number. 5. Prove that : $\sqrt{5}$ is an irrational number.
IIInd Week	6. Prove that : $\sqrt{7}$ is an irrational number. 7. Prove that : $\sqrt{11}$ is an irrational number. 8. Prove that : $3+\sqrt{2}$ is an irrational number. 9. Prove that : $5-\sqrt{3}$ is an irrational number. 10. Prove that : $\sqrt{2}+\sqrt{3}$ is an irrational number.
IIIrd Week	11. Explain why (i) $(7 \times 11 \times 13 + 13)$ (ii) $(7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1 + 5)$ (iii) $(2 \times 4 \times 6 \times 8 \times 10 + 2)$ (iv) $(4 \times 5 \times 6 \times 8 + 4)$ are composite numbers. 12. Given that $HCF(306, 657) = 9$, find $LCM(306, 657)$. 13. Given that $HCF(252, 594) = 18$, find $LCM(252, 594)$. 14. If the sum of LCM and HCF of two numbers is 1260 and their LCM is 900 more than their HCF then, find the product of two numbers. 15. Can two numbers have 15 as their HCF and 175 as their LCM? Give reasons.
IVth Week	16. Find the zeroes of the following quadratic polynomials and verify the relationship between the zeroes and the coefficients. (i) $x^2+7x+12$ (ii) $x^2+3x-10$ (iii) $5x^2-8x-4$ (iv) $4x^2-4x+1$ 17. Write a polynomial whose zeros are $(2+\sqrt{3})$ and $(2-\sqrt{3})$ 18. For what value of k is 3 a zero of the polynomial $2x^2-x+k$? 19. If the sum and product of the zeros of the polynomial ax^2-6x+c is equal to 12 each, find the value of a and c each.
Vth Week	20. Project: (i) Development of Number Systems with their needs. OR, (ii) 5 Indian Mathematicians and their contributions.

Ist Week	1. Fill in the blanks in the given pattern : (i) 2,4,6,8, ... , ... , ... (ii) 3,5,7,9, ... , ... , ... (iii) 1,3,6,10, ... , ... , ... (iv) 1,4,9,16, ... , ... , ... (v) 1,2,3,5,8, ... , ... , ... (vi) 1,3,9,27, ... , ... , ... 2. Expand the following pattern up to 10 numbers (a) 1= 1 (b) 1 + 3 = 4 (c) 1 + 3 + 5 = 9 (d) (e) (f) (g) (h) (i)																																
IInd Week	3. Expand the following pattern up to 15numbers : (a) 1 = 1 (b) 1+2+1 = 4 (c) 1+2+3+2+1 =9 (d) (e) (f) (j) (k) (g) (h) 4. Define the following : (a)Natural number (b) Whole number (c) Even number (d) Odd number (e) Prime number (f) Composite number (g) Triangular number (h) RegularPolygon (i) Virahanka number 5. Complete the following table for polygon <table><tr><th>Number of Sides</th><th>Name of regular polygon</th><th>Measure of each interior angle</th><th>Fig. of polygon</th></tr><tr><td>3 Sides</td><td></td><td></td><td></td></tr><tr><td>4 Sides</td><td></td><td></td><td></td></tr><tr><td>5 Sides</td><td></td><td></td><td></td></tr><tr><td>6 Sides</td><td></td><td></td><td></td></tr><tr><td>7 Sides</td><td></td><td></td><td></td></tr><tr><td>8 Sides</td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	Number of Sides	Name of regular polygon	Measure of each interior angle	Fig. of polygon	3 Sides				4 Sides				5 Sides				6 Sides				7 Sides				8 Sides							
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IIIrd Week	6. Compare using > = < : (a) 34872 __ 34900 (b) 87945 __ 78945 (c) 724582 __ 88899 (d) 206006 __ 116116 (e) 846470 __ 847740 (f) 42358 __ 423580 (g) 304560____ 345269 (h) 3045 __ 3321 (i) 97542 ____95724 7. Arrange the given numbers in ascending order. (a) 58,992; 59,228; 8,59,992; 1,54,992 (b) 7,96,441; 8,96,441; 7,99,641; 8,59,821 (c) 6,89,774; 6,78,940; 7,18,444; 5,68,710																																

	(d) 3,80,751; 3,36,547; 3,98,694; 3,26,880 (e) 5,56,442; 5,26,452; 5,95,442; 5,34,561 8. Arrange the given numbers in descending order. (a) 71, 800; 40,875; 72,984; 6,98,504 (b) 8,63,019; 8,60,548; 8,65,881; 8,59,004 (c) 6,30,062; 1,63,050; 8,39,035; 5,69,204 (d) 3,80,651; 3,37,547; 3,90,694; 3,36,880 (e) 8,56,422; 8,26,452; 8,95,442; 8,34,561 9. Use the given digits without repetition and make the greatest and smallest numbers. (a) 2, 8, 7, 4 (b) 9, 7, 4, 1 (c) 4, 7, 5, 0 (d) 1, 7, 6, 2 (e) 5, 4, 0, 3 (f) 3, 5, 8, 0, 1
IVth Week	10. Rewrite the following numbers placing comma (,) as per the Indian system: (i) 645367 (ii) 50301268 (iii) 436405 (iv) 3268431 (v) 2414360 11. Write the following in figures. (i) Six million, four hundred and eleven thousand, two hundred and sixty (ii) Sixty-five million, one hundred and sixteen thousand, five hundred and five (iii) Six hundred thousand, two hundred and fifteen (iv) One hundred and sixteen million, One hundred and ten thousand, and thirty-nine (v) Fifty-five million, four hundred and sixty thousand, nine hundred and two 12. Make two magic squares with the help of numbers.
Vth Week	13. The following series follows a fixed pattern: 2, 3, 3, 4, 4, 5, 5, 5, 6, ... If the pattern continues, determine how many times the number 9 appears in the NEXT 20 terms. 14. What will come in place of "?" in the given series? 15. What will come in place of "?" in the given series?
VIth Week	16. Make a Rangoli (Geometry art project) with the help of shapes, lines and angles. 17. Draw a map of your Dream House and colour it.



KENDRIYA VIDYALAYA SAHIBGANJ

SUMMER VACATION HOMEWORK (2026-

27) CLASS- VII

Instructions :

- Do work neatly
- Show all steps
- Use separate notebook
- Submit after vacation

SECTION A : Large Numbers Around Us

TASK 1 : Write numbers in words (both Indian and International)

Questions :

- 4,56,78,902
- 9,08,07,015
- 7,65,43,210
- 1,23,45,678
- 8,90,76,543
- 3,45,67,890
- 6,78,90,123
- 2,34,56,789
- 5,67,89,012
- 9,99,99,999

TASK 2 : Round Off as Directed

Questions:

- 4,56,789 (nearest tens, hundreds and thousands)

- 9,08,765 (nearest hundreds and thousands)
- 7,89,654 (nearest thousands and ten thousands)
- 6,54,321 (nearest ten thousands)
- 8,76,543 (nearest thousands)
- 3,45,678 (nearest hundreds)
- 5,67,890 (nearest ten thousands)
- 2,34,567 (nearest thousands)
- 9,87,654 (nearest hundreds)
- 1,23,456 (nearest ten thousands)

TASK 3: Round off to nearest ten thousands and then find the answers

Questions:

- $4,56,789 + 3,21,456$
- $9,87,654 - 4,32,198$
- $7,65,432 + 2,34,567$
- $8,90,123 - 5,67,890$
- $6,78,901 + 1,23,456$
- $5,43,210 - 2,10,987$
- $3,21,456 + 6,78,901$
- $9,00,000 - 4,56,789$
- $7,89,654 + 1,11,111$
- $8,88,888 - 3,33,333$

TASK 4: Express the numbers in words as directed

Questions:

- 4,56,78,900 → International
- 9,87,65,432 → International
- 7,65,43,210 → International
- 8,90,76,543 → International
- 3,45,67,890 → International
- 123,456,789 → Indian
- 56,789,012 → Indian
- 78,901,234 → Indian

- 90,876,543 → Indian
- 45,678,901 → Indian

TASK 5: Compare using <, > or =

Questions:

- 4,58,73,901 ____ 45,962,810
- 9,12,05,340 ____ 91,850,432
- 7,84,31,209 ____ 78,129,430
- 8,76,92,415 ____ 87,109,542
- 3,59,48,721 ____ 35,874,219
- 6,71,05,832 ____ 67,950,281
- 2,48,90,613 ____ 24,705,198
- 5,63,17,284 ____ 56,908,731
- 1,28,64,905 ____ 12,954,608
- 9,87,45,612 ____ 98,604,531

TASK 6: Solve Using Shortcut

Questions:

- 300×40
- 500×60
- 700×80
- 120×50
- 900×30
- $8000 \div 40$
- $9000 \div 300$
- $6000 \div 60$
- $10000 \div 50$
- $4500 \div 90$

SECTION B : Arithmetic Expressions

TASK 7: Identify the Terms and Operators

Questions:

- $4 + 5 \times 3 - 2$

- $10 \div 2 + 6 \times 4$
- $7 \times 8 - 3 + 9$
- $12 + 6 \div 3 \times 5$
- $20 - 4 \times 2 + 8$
- $15 \div 3 + 7 \times 2$
- $9 \times 9 - 6 \div 3$
- $18 + 12 \div 4 \times 3$
- $25 - 5 \times 4 + 10$
- $30 \div 5 + 6 \times 2$

TASK 8: Find the Values Using BODMAS

Questions:

- $24 \div 3 + 5 \times 2 - 4$
- $18 + 6 \times 5 - 12 \div 3$
- $40 - 8 \times 3 + 16 \div 4$
- $36 \div 6 \times 5 + 10$
- $50 - 10 \times 2 + 30 \div 5$
- $72 \div 8 + 9 \times 3 - 6$
- $60 - 5 \times 6 + 20 \div 4$
- $81 \div 9 \times 4 + 7$
- $45 + 5 \times 6 - 15 \div 3$
- $90 \div 10 + 8 \times 7 - 6$

SECTION C : Memory Work

TASK 9 :Learn Cubes (1–10)

TASK 10 :Learn Squares (1–15)

SECTION D : Project Work

TASK 11: Write about any one Indian Mathematician (Aryabhata / Ramanujan / Brahmagupta)

- Introduction
- Contributions
- Interesting Facts

Summer Vacation Home Work – 2026

Class - VIII

Ist Week	1. Writ the Square of the numbers from 1 to 50 . 2. Writ the Cube of the numbers from 1 to 25 . 3. Find square root of following numbers by Repeated subtraction method $\sqrt{36}$, $\sqrt{100}$, $\sqrt{225}$, $\sqrt{400}$. 4. Find square root of following numbers by Prime factorization method . $\sqrt{64}$, $\sqrt{144}$, $\sqrt{256}$, $\sqrt{441}$, $\sqrt{676}$.																																																		
IIInd Week	5. Find cube root of following numbers by Prime factorization method . $\sqrt[3]{64}$, $\sqrt[3]{1000}$, $\sqrt[3]{512}$, $\sqrt[3]{729}$, $\sqrt[3]{1728}$ 6. Find the smallest square number that is divisible by each of the following numbers: 4, 9, and 10. 7. How many numbers lie between the squares of the following numbers? (i) 16 and 17 (ii) 99 and 100 8. State true or false. Explain your reasoning. (i) The cube of any odd number is even. (ii) There is no perfect cube that ends with 8. (iii) The cube of a 2-digit number may be a 3-digit number. (iv) The cube of a 2-digit number may have seven or more digits. (v) Cube numbers have an odd number of factors.																																																		
IIIrd Week	9. Make magic square of 5 x 5 from 1 to 25 numbers. 10. Make magic square of 7 x 7 from 1 to 49 numbers. 11.																																																		
IVthWeek	12. The image below shows a logic machine, where numbers move from Column to Column (starting from column 1 as input and reach column 4) through the tunnel, where they change in a different way, each time. What would be the sum of A, B, and C? <table><tr><td>Column 1</td><td>Column 2</td><td>Column 3</td><td>Column 4</td></tr><tr><td> 4 </td><td> </td><td> 15 </td><td> </td></tr><tr><td> 22 </td><td> </td><td> 6 </td><td> </td></tr><tr><td> 11 </td><td> </td><td> 216 </td><td> </td></tr><tr><td> 7 </td><td> </td><td> 15 </td><td> </td></tr><tr><td> </td><td> 483 </td><td> 3 </td><td> </td></tr><tr><td> </td><td> 120 </td><td> 27 </td><td> </td></tr><tr><td> </td><td> A </td><td> B </td><td> C </td></tr></table> 13. Each geometrical shape denotes a certain operation. What will come in place of “?” <table><tr><td> 16 </td><td> → </td><td> 256 </td><td> 19 </td><td> → </td><td> 361 </td></tr><tr><td> 15 </td><td> → </td><td> 3375 </td><td> 11 </td><td> → </td><td> 1331 </td></tr><tr><td> 14 </td><td> + </td><td> 12 </td><td> → </td><td> ? </td><td></td></tr></table>	Column 1	Column 2	Column 3	Column 4	4		15		22		6		11		216		7		15			483	3			120	27			A	B	C	16	→	256	19	→	361	15	→	3375	11	→	1331	14	+	12	→	?	
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Vth Week	14. Draw different types of quadrilaterals and write its properties .																																																		
VIth Week	15. Write 20 SentenceS about great Mathematician “Aryabhata” and “S. Ramanujan”																																																		

OBJECTIVES

- Strengthen concepts
- Develop logical thinking
- Apply maths in real life
- Improve problem solving skills

CLASS 9 - MATHEMATICS

SUMMER HOLIDAY HOMEWORK

MAY - JUNE 2026

Think • Solve • Apply • Analyze • Achieve



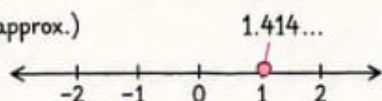
SECTION A - NUMBER SYSTEM

1. Task 1: Real Number Exploration

Write any 5 irrational numbers.

For each:

- Express on number line (approx.)
- Write decimal expansion



2. Task 2: Laws of Exponents

Create a formula chart.

Include all exponent laws and one example for each.

Example
 $a^m \times a^n = a^{m+n}$
 $2^3 \times 2^2 = 2^5$

SECTION B - ALGEBRA

3. Task 3: Polynomials Activity

Identify polynomials around you.

Write:

- Type (monomial / binomial / trinomial)
- Degree

Examples:

$5x^2$
 $3x + 4$
 $2x^2 + 3x + 1$

4. Task 4: Factorisation

Solve 10 problems.

Also explain method used.

METHODS

- Common factor
- Grouping
- Identities

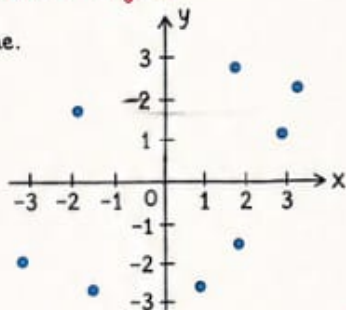
SECTION C - COORDINATE GEOMETRY

5. Task 5: Cartesian Plane Project

Draw a coordinate plane.

Plot 10 points.

Identify the quadrant for each point.

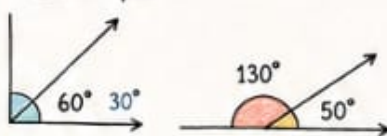


SECTION D - GEOMETRY

6. Task 6: Angle Properties

Draw diagrams to show:

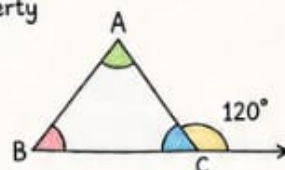
- Complementary angles
- Supplementary angles
- Linear pair



7. Task 7: Triangle Theorems

Write and illustrate:

- Angle sum property
- Exterior angle property



SECTION E - DATA HANDLING

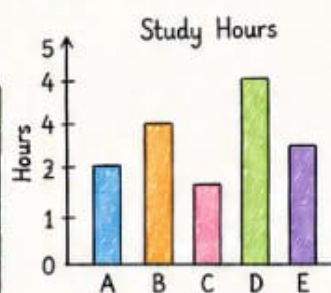
8. Task 8: Statistics Project

Collect data (e.g., study hours of 5 students).

Find:

- Mean
- Represent using graph

Student	Hours (per day)
A	2
B	3
C	1
D	4
E	2



SECTION F - REAL LIFE MATHS

9. Task 9: Budget Planning

Prepare a monthly budget.

Include:

- Income
- Expenses
- Savings



10. Task 10: Shopping Maths

Prepare a bill.

Calculate:

- Discount
- Final amount



SECTION G - THINKING & ANALYSIS

11. Task 11: Case Study

Solve a real-life maths situation.

Example:

A car travels 240 km in 4 hours. Find its speed.



12. Task 12: Puzzle & Patterns

Solve the following pattern:

2, 5, 10, 17, 26, ?

Create your own pattern and share.



SECTION H - PROJECT WORK

13. Task 13: Maths Scrapbook

Include:

- Formulas
- Graphs
- Theorems
- Real-life examples



14. Task 14: Maths Journal

Write daily:

- One concept
- One problem
- One learning



SUBMISSION GUIDELINES

- Maintain a neat and well-organized file.
- Show proper steps clearly.
- Use diagrams and colours.
- Focus on understanding.
- Submit after holidays.

WHY THIS HOMEWORK IS SPECIAL

- Helps you think logically.
- Applies maths in real life.
- Builds strong conceptual base.
- Enjoy learning through activities.



REMEMBER

- Be regular
- Be curious
- Be consistent
- Practice daily
- Grow every day!



MATHS IS ALL AROUND US.
EXPLORE IT, ENJOY IT,
AND MASTER IT!



LEARN TODAY, LEAD TOMORROW!