

**KENDRIYA VIDYALAYA OTTAPALAM
HOLIDAY HOMEWORK CLASS VI - X & XII
MATHEMATICS**

Class VI

HOLIDAY HOMEWORK CLASS VI (SUMMER VACATION)

1) Collect the population of states of India or of 10 large cities or of 10 countries and write them in the Indian Place Value System and International Place Value System.

2) PLACE VALUE SYSTEMS

The students will write down mobile numbers of all their family members and fill the following table:

S. No.	Mobile Numbers	Indian Place Value System	Number Name	International Place Value System	Number Name

3) ESTIMATIONS

The students will choose any 5 packed food items, paste their empty packs and complete the following table:

S. No.	Names of packed food items	Empty Packs	M.R.P. (in rupees)	Estimated Value (by general rule)

The students will find out the difference between the Maximum Retail Price (M.R.P.) and the Estimated value of each of the food items and will identify the food item/s for which this difference comes to be maximum and minimum.

5) ROMAN NUMERALS

Students will note down age of each family members and represents age in roman numerals

S. No.	Relation	Age in Hindu arabic numerals	Roman Numeral

Class VII

- 1) Use the sign ($<$, $>$, $=$) to make the statement true.
 - a. $-6+(-4)$ $-6-(-4)$
 - b. $(-2)+6-(12)$ $14-9+(-8)$
- 2) Write down a pair of integers whose sum = -4 and difference = -6
- 3) Find $(-20)\times(-2)\times(-3)\times(5)$
- 4) The product of 5 negative integers is a Integer
- 5) Verify $7\times[22+(-9)] = [7\times22] + [7\times(-9)]$
- 6) Additive inverse of -25
- 7) Define integers
- 8) Find the product $63\times0\times-7$

- 9) Fill the blanks with (>,<,<=) $-228+96+125$ $-451+197+76$
- 10) A football team loses 2 yards every 5mins. How many yards did the team lose after 15 mins?
- 11) In a school exam, Rohan's score was up to 500 points. Then he scored -100 points. What was his score then?
- 12) The expressions $2+(3+4)$ and $(2+3)+4$ are equal to the..... Property.
- 13) What should be subtracted from -9876 to obtain -9512?
- 14) Which property is reflected in this equation
 $7 \times 5 = 5 \times 7$
- 15) $-36 \div (\dots) = -9$

CLASS- VIII

- 1)Sum of two numbers is 36. If one number is 4 then form the linear equation
- 2)If the sum of two consecutive natural numbers is 7 then form the linear equation
- 3)If the sum of two consecutive odd natural numbers is 12 then form the linear equation
- 4)If the sum of two consecutive even natural numbers is 14 then form the linear equation
- 5) Twice 'p' is added to 'q' is 19. Form the equation.
- 6) Convert the following statements into linear equations.
- (a) 3 added to a number is 11
- (b) 2 subtracted from a number is equal to 15.
- (c) 3 times a number decreased by 2 is 4.
- (d) Sum of the number x and 7 is 13.
- 7) Form the mathematical statement for the following linear equations
- A) $x + 5 = 9$

B) $t - 3 = 7$

C) $2x + 3 = 21$

8. Mention the commutativity, associative and distributive properties of rational numbers. Also, check $a \times b = b \times a$ and $a + b = b + a$ for $a = \frac{1}{2}$ and $b = \frac{3}{4}$

9. Write any 5 rational numbers between $-\frac{2}{5}$ and $\frac{1}{2}$.

10. If the product of any two rational numbers is 2 and one of them is $\frac{1}{7}$, find the other?

11. Represent $-\frac{\square}{\square\square}$, $-\frac{\square}{\square\square}$, and $-\frac{\square}{\square\square}$ on the number line.

CLASS -IX

Factorize the following expressions

- 1) $y^2 + 4y + 4$
- 2) $9t^2 + 24ts + 16$
- 3) $x^2 - 6x + 9$
- 4) $4s^2 - 20s + 25$
- 5) $64a^2 - 49b^2$
- 6) $121y^2 - 144z^2$
- 7) $81x^2 - 169y^2$
- 8) $y^2 + 5y + 6$
- 9) $t^2 - 10t + 21$
- 10) $x^2 - x - 12$

Find a and b by rationalizing the denominator

- 1) $\frac{\sqrt{3}-1}{\sqrt{3}+1} = a + b\sqrt{3}$
- 2) $\frac{3+\sqrt{7}}{3-\sqrt{7}} = a + b\sqrt{7}$
- 3) $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a + b\sqrt{3}$
- 4) $\frac{\sqrt{5}+\sqrt{3}}{\sqrt{5}-\sqrt{3}} = a + b\sqrt{15}$
- 5) $\frac{4+\sqrt{5}}{4-\sqrt{5}} + \frac{4-\sqrt{5}}{4+\sqrt{5}} = a + b\sqrt{5}$

CLASS X

- 1) Each group prepare 20 one-word questions from the chapter REAL NUMBERS (In each group each member can contribute 5 questions)
 - 2) Complete the first enrichment activity
 - 3) Each group prepares one CCT question with 2 to 3 sub questions.
- 1) Case study-based questions.

School Library



In school library books are arranged in a systematic way. There is a new set of books in which there are 96 English books 240 Hindi books and 336 Mathematics books. These books have to be stacked in such away that all the books are stored topic wise and the height of each stack is the same. All the books are of the same thickness.

- (i) Find the number of books in each stack.
- (ii) Find the number of stacks in each subject

2) SOCIAL SCIENCE EXHIBITION.

The students of 5 Kendriya Vidyalaya 's of Eranakulam region have assembled in KV Ottapalam for social science exhibition on 10/09/2019. The number of students who came to represent their schools are given below. These boys and girls has to accommodate in various class rooms separately.

Sl no	Name of school	No of Boys	No of Girls	Total
1.	KV Kanjikode	66	144	210
2	KV Ottapalam	42	48	90
3	KV Thrissur	12	72	84
4	KV Ramavarmapuram	24	32	66
5	KV NAD Aluva	18	24	42

- 1) What is the minimum number of rooms that would be required to accommodate so that each room has same number of students without mixing students of each school?
- 2) Are the number of boys and girls in each room equal? If not explain.
- 3) In the morning of 11/9/2019, 12 more participants out of which 4 are boys of NAD Aluva are reporting to No1 Ottapalam. After they join will the number of rooms be same? If not, how many more rooms are needed? Explain.