

SESSION : 10

CLASS : V

SUBJECT : MATHEMATICS

CHAPTER NUMBER: 6

CHAPTER NAME : Rounding off- Estimation

SUBTOPIC : Estimation in number operation

Discussion of examples

CHANGING YOUR TOMORROW

LEARNING OBJECTIVE :

Enable the students

- **To understand the need of rounding off**
- **To apply it in day to day life**
- **To get a general idea about situations involving addition, subtraction, multiplication or division.**

6.2 ESTIMATION IN NUMBERS OPERATIONS

Estimation helps us to get a general idea about situations involving addition, subtraction, multiplication or division. It can be extremely useful to calculate costs, expenditure, profits, losses, etc. while dealing with the actual numbers.

An estimation is the answer close to the actual answer.



ESTIMATION IN NUMBERS OPERATIONS

EXAMPLE 1

Estimate the following sum by rounding off to the nearest 10,000.

$$8,42,399 + 98,559 + 49,308$$

Solution :

$$8,42,399 \text{ rounding off to the nearest } 10,000 = 8,40,000$$

$$98,559 \text{ rounding off to the nearest } 10,000 = 1,00,000$$

$$49,308 \text{ rounding off to the nearest } 10,000 = \begin{array}{r} + \\ 50,000 \end{array}$$

So, the estimated sum is = 9,90,000

ESTIMATION IN NUMBERS OPERATIONS

EXAMPLE 2

Estimate the difference to the nearest 1000 and verify if the estimated difference is close to the actual difference.

$$88,303 - 69,796$$

Solution :

$$88,303 \text{ rounding off to the nearest } 1,000 = 88,000$$

$$69,796 \text{ rounding off to the nearest } 1,000 = 70,000$$

$$\text{The estimated difference} = 18,000$$

ESTIMATION IN NUMBERS OPERATIONS

Solution :

$$\begin{array}{r} 88,303 \\ - 69,796 \\ \hline 18,507 \end{array}$$

The actual difference = 18,507

So, 18,000 is close to the actual difference
i.e. 18,507

ESTIMATION IN NUMBERS OPERATIONS

EXAMPLE 3

Estimate the following by rounding off the multiplicand and the dividend to the nearest 100 and find the difference between the estimated and the actual answer.

a) $4,792 \times 3$

b) $9,573 \div 3$

Solution :

a) Rounding off 4,792 to the nearest 100 , we get 4,800

$$4,800 \times 3 = 14,400$$

$$\text{Now, } 4,792 \times 3 = 14,376$$

So, Estimated product – Actual product

$$14,400 - 14,376 = \mathbf{24}$$

ESTIMATION IN NUMBERS OPERATIONS

EXAMPLE 3

Estimate the following by rounding off the multiplicand and the dividend to the nearest 100 and find the difference between the estimated and the actual answer.

a) $4,792 \times 3$

b) $9,573 \div 3$

Solution :

b) Rounding off 9,573 to the nearest 100 , we get 9,600

$$9,600 \div 3 = 3,200$$

$$\text{Now, } 9,573 \div 3 = 3,191$$

So, Estimated quotient – Actual quotient

$$3,200 - 3,191 = \mathbf{9}$$

ACTIVITY

GOOD HABITS !

Piyali and Pallavi wanted to solve the puzzle given in a newspaper. It said :

On rounding off the numbers, you will explore a good habit that everyone should adapt.

- 34,928 (rounded off to nearest ten) ← X
- 8,52,762 (rounded off to nearest lakh) ← R
- 2,34,111 (rounded off to nearest hundred) ← E
- 39,582 (rounded off to nearest 100) ← C
- 3,92,627 (rounded off to nearest lakh) ← S
- 1,12,43,312 (rounded off to nearest ten lakh) ← I



The rounded off numbers are written below. Fill in the correct alphabets at the correct places to solve the puzzle.

E	X	E	R	C	I	S	E
2,34,100	34,930	2,34,100	9,00,000	39,600	1,10,00,000	4,00,000	2,34,100

LEARNING OUTCOME:

Students are able

- To understand the need of rounding off
- To apply it in day to day life
- To get a general idea about situations involving addition, subtraction, multiplication or division.

HOME WORK-

Complete Ex 6 A Q. No 6 to 8 in the notebook

THANKING YOU
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