

ACTIVITY NO. - 2

Subject	MATHEMATICS
Class	VI
Chapter/Unit	Whole Numbers
Topic	Patterns In Whole Numbers
Time	30 minutes
Nature of Activity	Individual

What will I learn (Learning outcome)?

To demonstrate a (4 x 4) Magic Square.

Skills:- Problem Solving, Critical Thinking, Recognizing, Creating

What I have to do?

To demonstrate a (4 x 4) Magic Square by 'Cup Method'.

What do I require?

Number strips, (4 x 4) square and sketch pens.

What do I need to know?

Whole numbers, Natural numbers and Basic fundamental operations.

➤ Teacher's Activity

Teacher will enable the students to recall whole numbers, natural numbers, basic fundamental operations and will explain the steps of the activity.

How will I proceed?

➤ Student's Activity

- Take any set of 16 consecutive natural numbers, say 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.
- In the given (4 x 4) square, fill the first 8 cells with the numbers 3, 4, 5, 6, 7, 8, 9, 10 as shown in Fig.1.

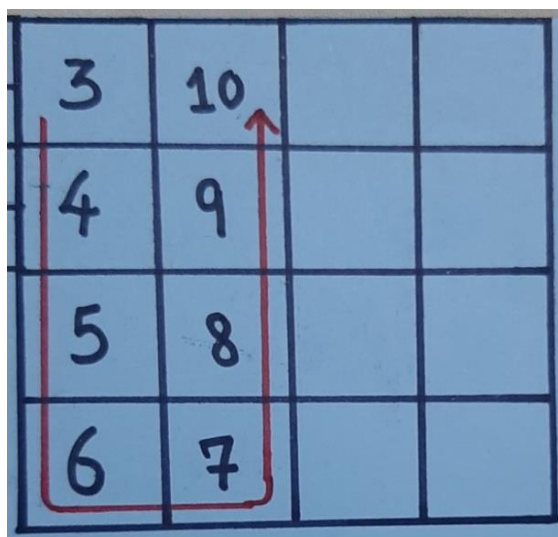


Fig.1 (It looks like an open cup)

- Now, fill the remaining 8 cells by the numbers 11, 12, 13, 14, 15, 16, 17, 18 as shown in Fig.2.

3	10	14	15
4	9	13	16
5	8	12	17
6	7	11	18

Fig.2

- Keep Row 1 and Row 4 as they are. Reverse the numbers of Row 2 and Row 3 as shown in Fig.3.

3	10	14	15
16	13	9	4
17	12	8	5
6	7	11	18

Fig.3

- Now this number square has 'Magic Properties'.

What have I observed?

Complete the following table:

Sum of Numbers									
Row				Column				Diagonal	
1	2	3	4	1	2	3	4	1	2

What have I learnt?

To demonstrate a _____ Magic Square.

What am I curious to know?

Create a (5 x 5) Magic Square by 'Cup Method'.

Let me evaluate myself

1. Is this a (4 x 4) magic square? If yes, find the magic number.

16	3	2	13
5	2	11	8
9	6	7	12
4	15	14	1

2. Name the given magic square which was named after a famous Mathematician.

22	12	18	87
88	17	9	25
10	24	89	16
19	83	23	11

3. Create your own (3 x 3) magic square.

4. In a magic square, each row, column and diagonal add up to the same total. Fill in the missing numbers in the given magic square, where sum is 12:

	8	1
2		6
7	0	

5. Is this a (3 x 3) magic square of Prime numbers? Justify.

23	11	3
17	19	5
2	13	59
