

GOVERNMENT HIGHER SECONDARY SCHOOL-PENNALURPET-602026

CLASS:VI

TERM: II

SUB: MATHEMATICS

UNIT-1: NUMBERS

TOPIC: ODD/EVEN-FACTORS/MULTIPLES

Name:

PRIME NUMBERS AND COMPOSITE NUMBERS

Anbusevan's Ways By arranging 5 buttons in a row, he gets 1 row  $1 \times 5 = 5$		By arranging 1 button in each row, he gets 5 rows  $5 \times 1 = 5$	
He realises that 5 buttons can be arranged in only 2 rectangular ways. Hence, the only factors of 5 are 1 and 5 (number of rows).			
Kayalvizhi's Ways By arranging 6 buttons in a row, she gets 1 row  $1 \times 6 = 6$	By arranging 3 buttons in each row, she gets 2 rows  $2 \times 3 = 6$	By arranging 2 buttons in each row, she gets 3 rows  $3 \times 2 = 6$	By arranging 1 button in each row, she gets 6 rows  $6 \times 1 = 6$
She realises that 6 buttons can be arranged in 4 rectangular ways. Hence, the factors of 6 are 1, 2, 3 and 6 (number of rows).			

NUMBER	RECTANGULAR ARRANGEMENTS	FACTORS	NO. OF FACTORS	PRIME OR COMPOSITE
1	$1 \times 1 = 1$	1	1	
2	$1 \times 2 = 2, 2 \times 1 = 2$	1,2	2	
3	$1 \times 3 = 3, 3 \times 1 = 3$	1,3	2	
4	$1 \times 4 = 4, 2 \times 2 = 4, 4 \times 1 = 4$	1,2,4	3	
5	$1 \times 5 = 5, 5 \times 1 = 5$	1,5	2	
6	$1 \times 6 = 6, 2 \times 3 = 6, 3 \times 2 = 6, 6 \times 1 = 6$	1,2,3,6	4	
7	$1 \times 7 = 7, 7 \times 1 = 7$	1,7	2	
8	$1 \times 8, 2 \times 4, 4 \times 2, 8 \times 1$	1,2,4,8	4	
9	$1 \times 9, 3 \times 3, 9 \times 1$	1,3,9	3	
10	$1 \times 10, 2 \times 5, 5 \times 2, 10 \times 1$	1,2,5,10	4	

RESULT

- If a number has only one factor
- If a number has only two factors [one and itself]
- If a number has more than two factors
- is neither prime nor Composite number.
- is only even prime number.