SESSION : 19

CLASS : V

SUBJECT : MATHEMATICS

CHAPTER NUMBER: 8

CHAPTER NAME : FACTORS AND MULTIPLES

SUB-TOPIC : Important facts Multiples and factors

Exercise- 8 A Q. No. 3

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LEARNING OBJECTIVE :

Enable the students

- **To find out the multiples and factors of a number**
- **Understand the difference between multiples and factors**

TEST OF DIVISIBILTY: 11

If the difference between the sum of the digits at odd places (from the right) and the sum of the digits at even places (from the right) of the number is either 0 or divisible by 11, then the number is divisible by 11

Examples: 308, 1331, 61809, 6556… etc.

Number	Sum of the digits (at odd places) From the right	Sum of the digits (at even places) From the right	Difference
308	8 + 3 = 11	0	11 - 0 = 11
1331	1 + 3 = 4	3 + 1 = 4	4 - 4 = 0
61809	9 + 8 + 6 = 23	0 + 1 = 1	23 - 1 = 22
6556	6 + 5 = 11	6 + 5 = 11	11 – 11 = 0

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EXERCISE- 8 (A)

2. What is the smallest number which should be (i) subtracted from and (ii) added to:

a. 3646 to get a number divisible by 3 i. 1 ii. 2

Checking : 3 + 6 + 4 + 6 = 19
19 -1 = 18 or 19 + 2 = 21

b. 12642 to get a number divisible by 4 i 2 ii 2

Checking : 4 × 10 = 40 , 4 × 11 = 44
So, we have to subtract 2 or add 2 to make it divisible by 4.

c. 5213 to get a number divisible by 5 i. 3 ii. 2

EXERCISE- 8 (A)

2. What is the smallest number which should be (i) subtracted from and (ii) added to:

d. 7427 to get a number divisible by 6 i. 5 ii. 1

Checking : 7 + 4 + 2 + 7 = 20
20 – 5 = 15 and 20 + 1 = 21

e. 9466 to get a number divisible by 9 i. 7 ii. 2

Checking : 9 + 4 + 6 + 6 = 25
25 – 7 = 18 and 20 + 2 = 27

f. 26,303 to get a number divisible by 11 i. 2 ii. 9

Checking : 3 + 3 + 2 = 8 , 0 + 6 = 6
8 – 6 = 2 (Either it should be 0 or 11 or multiples of 11
So, we have to subtract 2 or add 9 to make it divisible by 11.

IMPORTANT FACTS

PRIME NUMBER

A prime number is a whole number greater than 1 which has only two different factors namely 1 and the number itself.
Examples:- 1, 3, 5,7,11… etc.

2 is the only even number which is a prime number, all other prime numbers are odd numbers.

COMPOSITE NUMBER

A number which is not a prime number is a composite number.
It has more than 2 factors
Examples:- 4, 6, 8, 9, 10, 12, 16… etc.

1 is a unique number as it has only one factor. It is neither prime nor composite number.

MULTIPLES AND FACTORS

MULTIPLE

A multiple of a number is a product of the number and a whole number.

Examples: multiples of 4 are: 4×1= 4
4×2= 8
4×3= 12… etc.

So, multiples of 4 are 4, 8, 12, ……etc.

FACTORS

A factor is a divisor which divides a number exactly. Or the number is a factor of another number if it divides the number exactly .[0 as remainder]

Examples: 15 ÷ 5 =3, here 5 is the factor of 15
24 ÷ 4 =6, here 4 is the factor of 24

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A factor which is a prime number is called a prime factor.

We can find out prime factor of a number using short division method.

Short division method

Find the prime factors of 750

2	750
3	375
5	125
5	25
5	5
	1

∴ Prime factors of 750 are 2, 3 and 5

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EXERCISE 8 A

- **Q. 3 FIND OUT IF THE FIRST NUMBER IS THE FACTOR OF THE SECOND NUMBER. SAY "YES" OR "NO".**

a. 8 : 1 0 0 8 — Yes

b. 7 : 6 5 8 — Yes

c. 9 : 3 1 4 5 — No

d. 1 1 : 3 6 4 4 — No

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EXERCISE 8 A

- **Q. 3 FIND OUT IF THE FIRST NUMBER IS THE FACTOR OF THE SECOND NUMBER. SAY "YES" OR "NO".**

e. 1 9 : 6 2 6 **No**

f. 1 7 : 3 9 8 **No**

g. 1 3 : 4 1 6 3 5 5 6 **No**

h. 1 2 : 7 8 0 **Yes**

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What have we learned so far?

Prime Number & Composite Numbers

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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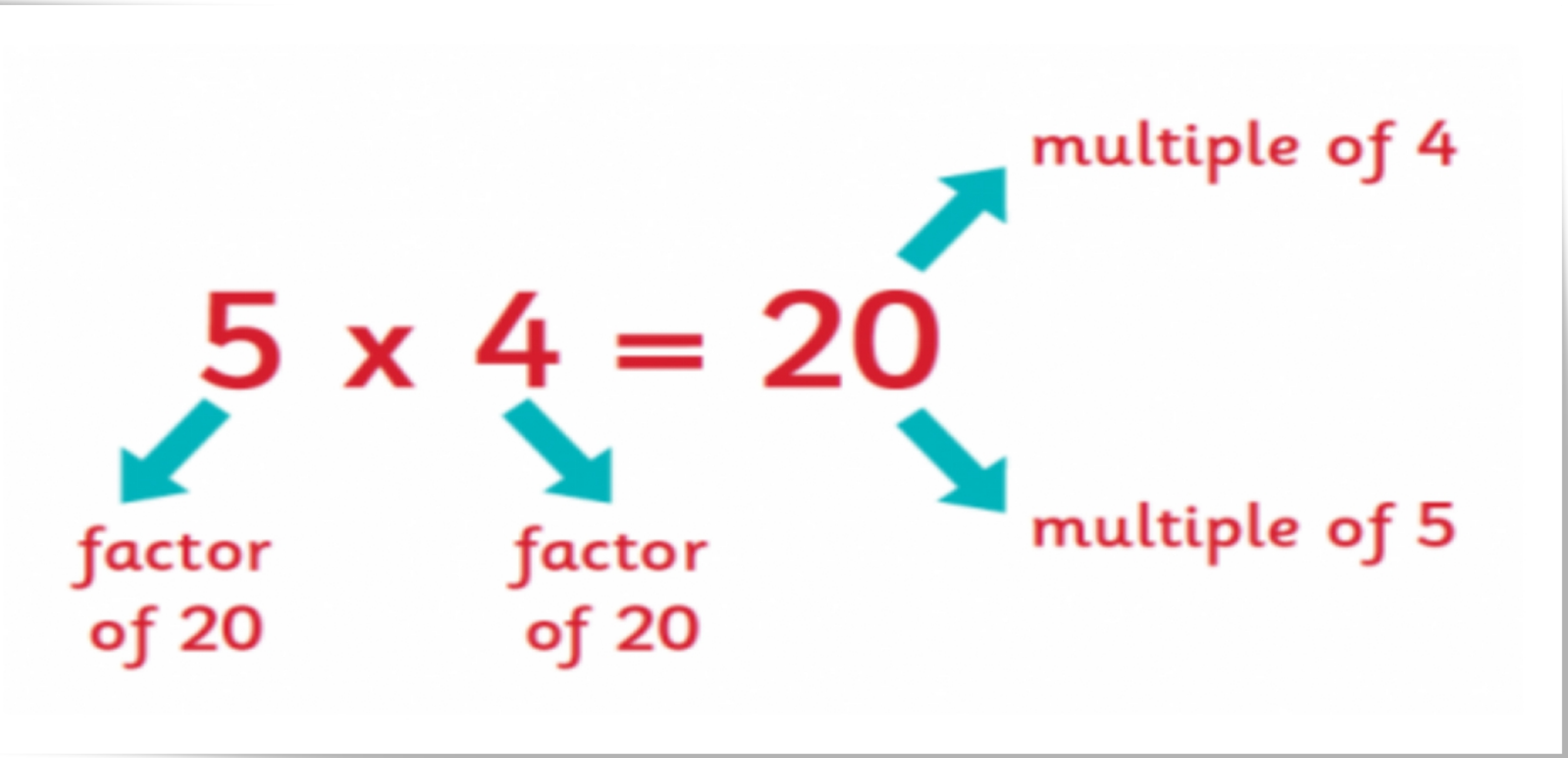
What have we learned so far?

Factors And Multiples



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LEARNING OUTCOME :

Students are able

- **To find out the multiples and factors of a number**
- **Understand the difference between multiples and factors**

THANKING YOU

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