CHAPTER - 8

Factors and Multiples :→

WORKSHEET

A. Fill in the blanks :→

a) 1, 3, 5 and 15 are called factor of 15.

b) All even numbers are divisible by 2

c) 1 is a number which is neither prime nor composite.

d) 18 is a Multiple of 3 and 6.

e) Numbers that have only two factors, 1 and the number itself, are called prime numbers.

B. Match the following :→

Column - A	Column - B
1. Factors of 35	(i) 1
2. Multiple of 5	(ii) Infinite
3. Factors of every number	(iii) 50
4. Smallest prime number	(iv) 7
5. Factors of a number	(v) 2

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C. Do as directed :—

(a) Find the H.C.F. of 16, 24 and 85.

Solution :→

$$24 \overline{)85}(3$$
$$72$$
$$13 \overline{)24}(1$$
$$13$$
$$11 \overline{)13}(1$$
$$11$$
$$02 \overline{)11}(5$$
$$10$$
$$01 \overline{)2}(2$$
$$2$$
$$0$$

So, HCF = 1.

$$1 \overline{)16}(16$$
$$-16$$
$$00$$

(b) Find the L.C.M of 16, 28 and 32

Solution :→

2	16, 28, 32
2	8, 14, 16
2	4, 7, 8
2	2, 7, 4
2	1, 7, 2
7	1, 7, 1
	1, 1, 1.

LCM = $2 \times 2 \times 2 \times 2 \times 2 \times 7 \times 1$
= 224

So, LCM = 224

(c) The H.C.F of two numbers is 5 and L.C.M. is 60. If one of the numbers is 20, Find the other number.

Solution :→

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HCF of Two numbers = 5
LCM of Two numbers = 60
one of the numbers = 20
The other number = LCM x HCF =
product of two number = 60 x 5
= 300 one no = 20

$= \frac{\cancel{300}^{15}}{\cancel{20}} = 15$

So, The other ~~numumbe~~ number is 15

(d) Find the greatest number which divides 90 and 405 without leaving a remainder.

Solution ⇒

~~90) 405 (4~~
~~360~~
~~045~~

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90 ) 405 ( 4
     360
     ---
      45 ) 90 ( 2
           90
           --
            0
```

So, HCF = 45

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⑥ The bells of a temple began ringing at 9.am. The first bell rings after every 30 minutes and the second one rings after every 45 minutes and the third one rings after every hour. At what time will they ring together again?

Solution:→

1st bell rings after every = 30 minutes
2nd bell rings after every = 45 minutes
3rd bell rings after every = 1 hour = 60 minutes

They will ring together after LCM of 30, 45, 60 minutes.

2	30, 45, 60
2	15, 45, 30
3	15, 45, 15
3	5, 15, 5
5	5, 5, 5
	1, 1, 1

LCM = 2 × 2 × 3 × 3 × 5
= 180 minutes
= 180/60 ~~minutes~~
= 3 hours

So, All Three bells will ring together after 3 hours