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

Solution: LCM of

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

16, 28, 32 = 2 × 2 × 2 × 2 × 7 × 2 = 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: The HCF of two number = 5
LCM of two numbers = 60
One of the number = 20
The other number = $\frac{60 \times 5}{20} = \frac{15}{1}$

∴ The other number = 15

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

Solution:

90) 405 (4 → Q
− 360
045) 90 (2
− 90
0 → R

∴ the greatest number is 45 that leaves no remainder.

e) Three bells of a temple began ringing at 9 a.m. 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: LCM of 30, 45 and 60 =

5	30, 45, 60
3	6, 9, 12
2	2, 3, 4
	1, 3, 2

LCM = 5 × 3 × 3 × 2 × 2 = $\frac{180}{60}$ = 3 hours

9 hour + 3 = 12

∴ They will ring at 12 noon together.

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 ~~Composite~~ prime numbers.

B. Match the following :

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

C. Do as directed:

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

Solution:

~~2 \| 16, 24, 85~~
~~2, 12, 8~~

2 \| 16
2 \| 8
2 \| 4
2 \| 2
1

2 \| 24
2 \| 12
2 \| 6
3

5 \| 85
17

16 = 2 × 2 × 2 × 2
24 = 2 × 2 × 2 × 3
85 = 5 × 17
= 2 × 2 × 2 = 8