Ch-8-Factors and multiples

A. Fill in the blanks

a) factors

b) 3

c) 1

d) Multiple

e) prime factor

B. Match the following

1- iv, 2- iii, 3- i, 4- v, 5- ii

C. Do as Directed

a) Find the H.C.F of 16, 24 and 84

Ans- 2|16, 24, 84
2|8, 12, 42
4, 6, 21

H.C.F = 2×2 = 4

b) Find
2 | 16, 28, 32
2 | 8, 14, 16
7 | 4, 7, 8
2 | 4, 1, 8
2 | 3, 1, 4
2 | 1, 1, 2
1, 1, 1

L.C.M = 2 × 2 × 7 × 2 × 2 × 2 = 448

(c) The H.C.F of two number = 5

The L.C.M of two number = 60

One number = 20

$$\frac{\text{L.C.M} \times \text{H.C.F}}{\text{One number}} = \text{The other number}$$

$$\Rightarrow \text{The other number} = \frac{5 \times 60}{20}$$

$$= \frac{5 \times 60}{20} = 15$$

So, the other number is 15.

d) L.C.M of ~~12, 16, 20~~ 90, 405 =

2 | 12, 16, 20
2 | 6, 8, 10

5 | 90, 405
3 | 18, 81
3 | 6, 27
3 | 2, 9
2, 3

$5 \times 3 \times 3 \times 3 = 135$

So, 135 is the greatest number which when divided by 90 and 405 leaves remainder.

e) Three bells of a temple began ringing at 9 a.m.

The first bell rings after every 30 minutes.

The second one rings after every 45 minutes.

The third one rings after every hour.

First we find the L.C.M of 30, 45 and

$60 = 5 \times 3 \times 2 \times 3 \times 2 = 180$

180 minutes = 3hrs

So, the bells will ring together at every 3hrs.

Rough

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