CLASS NOTES-ANSWERS

Exercise 3.4

1. Find the LCM of the following numbers.

a. 12 and 15	b. 10, 15 and 30	c. 12, 36 and 48
d. 15, 25 and 75	e. 42, 70 and 98	f. 108 and 144
g. 20, 35 and 105	h. 40, 72 and 108	i. 65, 130 and 260

Answer:

a. LCM of 12 and 15 = 60

b. LCM of 10, 15 and 30 = 30

c. LCM of 12, 36 and 48 = 144

d. LCM of 15, 25 and 75 = 75

e. LCM of 42, 70 and 98 = 1470

f. LCM of 108 and 144 = 432

g. LCM of 20, 35 and 105 = 420

h. LCM of 40, 72 and 108 = 1080

i. LCM of 65, 130 and 260 = 260

2. Cups are sold as a pack of 6, plates are sold as a pack of 8 and spoons are sold as a pack of 12. if you want to have the same number of each item for a party, what is the least number of packs of each item you need to buy?

Answer: LCM of 6, 8, 12 = 24

The least number of packs of each item you need to buy is

$$\text{Number of packs of cups} = \frac{24}{6} = 4$$

Number of packs of plates = $\frac{24}{8}$ = 3

Number of packs of spoons = $\frac{24}{12}$ = 2

3. Three different bells ring together at 8:00 a.m. Then the bells ring at intervals of 15 minutes, 25 minutes and 30 minutes respectively. When will the three bells ring together?

Answer:

Three different bells ring together at 8:00 a.m.

LCM of 15, 25 and 30 = 150

The three bells ring together again after 150 minutes

i.e., after 2 hours 30 minutes.

The three bells ring together at 8:00 + 2 hours 30 minutes

i.e., at 10:30 a.m.

4. The HCF and LCM of two numbers are 10 and 60 respectively. If the first number is 20, find the second number.

Answer:

1st number = 20, HCF = 10 and LCM = 60

Product of two numbers = HCF × LCM

20 × 2nd number = 10 × 60

20 × 2nd number = 600

2nd number = 600 ÷ 20

∴ 2nd number = 30