

Solutions

S1. Ans.(b)

Sol.

$$\begin{aligned}\text{Req. no.} &= (\text{Lcm of } 4, 6, 8, 12 \text{ and } 16) + 2 \\ &= 48 + 2 = 50\end{aligned}$$

S2. Ans.(a)

Sol.

L.C.M. of 4, 6, 8, 14 sec = 168 sec = 2 min 48 sec.

At 12 : 02 : 48 'o' clock, they will toll together.

S3. Ans.(a)

Sol.

A.T.Q.-

$$x + 12x = 403$$

$$x = 31$$

$$\text{So, LCM} = 12 \times 31 = 372$$

$$93 \times \text{second no.} = 31 \times 372$$

$$\text{Second no.} = \frac{31 \times 372}{93} = 124$$

S4. Ans. (d);

Sol. HCF must be a factor of LCM,

35 is not a factor.

S5. Ans.(c)

Sol. HCF (Co-prime numbers) = 1

LCM \times HCF = 1st no. \times 2nd no.

$$\text{LCM} = \frac{285}{1} = 285$$

S6. Ans.(d)

Sol. $12(p \times q) = 168 \times 12$

$$Pq = 14$$

$$p - q = 5$$

the no. 7 and 2 are value of p and q.

Sum of number = $12(p+q)$

$$= 12 \times 9$$

$$= 108$$

S7. Ans.(b)

Sol.

$$13x. 13y = 6760$$

$$x. y = 40$$

Possible pair = $x \quad y$

40	1	H.C.F is not 13 in both pair.
20	2	
10	4	
8	5	

Required Pair = (40, 1)(8, 5)
H.C.F. is 13 → (520, 13)(104, 65)

S8. Ans.(a)

$$\begin{aligned} \text{LCM} \times \text{HCF} &= \text{I}^{\text{st}} \times \text{II}^{\text{nd}} \\ 10^3 \times 5^2 \times 10^2 &= 10^4 \times \text{II}^{\text{nd}} \\ \text{II}^{\text{nd}} \text{ number} &= 250 \end{aligned}$$

S9. Ans.(b)

Sol. The ball begins to tall together again = LCM of (15, 17, 19, 24 and 28)
= 271320

S10. Ans.(d)

Sol. HCF of a fraction:

$$\begin{aligned} &\Rightarrow \frac{\text{HCF of Numerator}}{\text{LCM of denominator}} \\ &\Rightarrow \frac{\text{HCF} (5, 4, 25)}{\text{LCM} (4, 3, 8)} \\ &\Rightarrow \frac{1}{24} \end{aligned}$$