Solutions

S1. Ans.(b)
Sol.
Req. no. $= (Lcm\ of\ 4,6,8,12\ and\ 16) + 2$
$= 48 + 2 = 50$

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.–
$x + 12x = 403$
$x = 31$
So, LCM = 12 × 31 = 372
93 × second no. = 31 × 372
Second no. $= \frac{31\times372}{93} = 124$

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 × HCF = 1st no. × 2nd no.
LCM = $\frac{285}{1}$ = 285

S6. Ans.(d)
Sol. 12(p×q)= 168×12
Pq = 14
p-q = 5
the no. 7 and 2 are value of p and q.
Sum of number = 12(p+q)
= 12×9
= 108

S7. Ans.(b)
Sol.

$13x.13y = 6760$

$x.y = 40$

Possible pair $= x \;\; y$

40	1
20	2
10	4
8	5

H.C.F is not 13 in both pair.

Required Pair $= (40, 1)(8, 5)$

H.C.F. is 13 $\rightarrow (520, 13)(104, 65)$

S8. Ans.(a)

LCM × HCF = Ist × IInd

$10^3 \times 5^2 \times 10^2 = 10^4 \times$ IInd

IInd number = 250

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:

$\Rightarrow \frac{\text{HCF of Numerator}}{\text{LCM of denominator}}$

$\Rightarrow \frac{HCF\ (5,4,25)}{LCM\ (4,3,8)}$

$\Rightarrow \frac{1}{24}$