

11- Three number are in the ratio of 3 : 4 : 5 and their L.C.M. is 2400. Their H.C.F. is:

- **A.40**
- **B.80**
- **C.120**
- **D.200**
- **E.None of these**

Answer & Explanation

Answer - **A** (40)

Explanation - Let the numbers be $3x$, $4x$ and $5x$.

Then, their L.C.M. = $60x$.

So, $60x = 2400$ or $x = 40$.

The numbers are (3×40) , (4×40) and (5×40) .

Hence, required H.C.F. = 40.

12- The G.C.D. of 1.08, 0.36 and 0.9 is:

- **A.0.03**
- **B.0.9**
- **C.0.18**
- **D.0.108**
- **E.None of these**

Answer & Explanation

Answer - **C** (0.18)

Explanation - Given numbers are 1.08, 0.36 and 0.90.

H.C.F. of 108, 36 and 90 is 18,

H.C.F. of given numbers = 0.18.

13- The product of two numbers is 2028 and their H.C.F. is 13. The number of such pairs is:

- **A.1**
- **B.2**
- **C.3**

- **D.4**
- **E.**None of these

Answer & Explanation

Answer - **B** (2)

Explanation - Let the numbers $13a$ and $13b$.

Then, $13a \times 13b = 2028$

$$ab = 12.$$

Now, the co-primes with product 12 are (1, 12) and (3, 4).

[Note: Two integers a and b are said to be **coprime** or relatively prime if they have no common

positive factor other than 1 or, equivalently, if their greatest common divisor is 1]

So, the required numbers are (13 x 1, 13 x 12) and (13 x 3, 13 x 4).

Clearly, there are 2 such pairs.

14- The least multiple of 7, which leaves a remainder of 4, when divided by 6, 9, 15 and 18 is:

- **A.**74
- **B.**94
- **C.**184
- **D.**364
- **E.**None of these

Answer & Explanation

Answer - **D** (364)

Explanation - L.C.M. of 6, 9, 15 and 18 is 90.

Let required number be $90k + 4$, which is multiple of 7.

Least value of k for which $(90k + 4)$ is divisible by 7 is $k = 4$.

Required number = $(90 \times 4) + 4 = 364$.

15- Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together?

- **A.**4
- **B.**10
- **C.**15
- **D.**16
- **E.**None of these

Answer & Explanation

Answer - **D** (16)

Explanation - L.C.M. of 2, 4, 6, 8, 10, 12 is 120. So, the bells will toll together after every 120 seconds, i.e, 2 minutes. In 30 minutes, they will toll together $30/2 + 1 = 16$

16- The least number, which when divided by 48, 60, 72, 108 and 140 leaves 38, 50, 62, 98 and 130 as remainders respectively, is:

- **A.**11115
- **B.**15110
- **C.**15120
- **D.**15210
- **E.**None of these

Answer & Explanation

Answer - **B** (15110)

Explanation - Here $(48 - 38) = 10$, $(60 - 50) = 10$, $(72 - 62) = 10$, $(108 - 98) = 10$ & $(140 - 130) = 10$.

Required number = (L.C.M. of 48, 60, 72, 108, 140) – 10

= $15120 - 10 = 15110$

17- The H.C.F. of two numbers is 11 and their L.C.M. is 7700. If one of the numbers is 275, then the other is:

- **A.**279
- **B.**283
- **C.**308
- **D.**318
- **E.**None of these

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Answer & Explanation**Answer** - C (308)**Explanation** -

$$\text{Other number} = \frac{11 \times 7700}{275} = 308$$

18- The least number which should be added to 2497 so that the sum is exactly divisible by 5, 6, 4 and 3 is:

- A.3
- B.13
- C.23
- D.33
- E.None of these

Answer & Explanation**Answer** - C (23)**Explanation** - L.C.M. of 5, 6, 4 and 3 = 60. On dividing 2497 by 60, the remainder is 37. Number to be added = $(60 - 37) = 23$

19- The H.C.F. of 1.75, 5.6 and 7 is:

- A.0.07
- B.0.7
- C.3.5
- D.0.35
- E.None of these

Answer & Explanation**Answer** - D (0.35)**Explanation** - Given numbers with two decimal places are : 1.75, 5.60 and 7.00. Without decimal places, these numbers are : 175, 560 and 700, whose H.C.F. is 35. H.C.F of given numbers = 0.35

20- A, B and C start at the same time in the same direction to run around a circular stadium. A completes a round in 252 seconds, B in 308 seconds and C in 198 seconds, all starting at the same point. After what time will they meet again at the starting point?

- A.26 minutes 18 seconds
- B.42 minutes 36 seconds

- C.45 minutes
- D.46 minutes 12 seconds
- E.None of these

Answer & Explanation

Answer - D (46 minutes 12 seconds)

Explanation - L.C.M. of 252, 308 and 198 = 2772. So, A, B and C will again meet at the starting point in 2772 sec i.e., 46 min. 12 sec

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