H.C.F and L.C.M. Questions and Answers for Bank Exams Pdf

1. Three pieces of timber 42 m, 49 m and 63 m long have to be divided into planks of the same length. What is the greatest possible length of each plank?

a. 7 m

b. 14 m

c. 42 m

d. 63 m

Ans: A

Greatest possible length of each plank = (H.C.F. of 42, 49, 63) m = 7m.

2. What is the smallest number which when increased by 3 is divisible by 16, 24, 30 and 32?

a. 480

b. 475

c. 472

d. 477

Ans: D

Required number = (L.C.M. of 16, 24, 30 and 32) – 3

= 480 - 3 = 477.

3. Find the greatest number of five digits which becomes exactly divisible by 10, 12, 15 and 18 when 3769 is added to it.

a. 99811

b. 99911

c. 98911

d. 99011

Ans: B

L.C.M. of 10, 12, 15 and 18 = 540.

Dividing (99999 + 3769) by 540, the remainder is 88.

$\therefore$ Required number $= 99999 - 88 = 99911.$

4. Find the least number of five digits which when divided by 8, 12, 16 and 20 leaves remainders 1, 5, 9 and 13 respectively.

a. 10003

b. 10093

c. 10073

d. 10013

Ans: C

Least number of five digits divisible by L.C.M. of 8, 12, 16, 20 is 10080.

$\therefore$ Required number $= 10080 - 7 = 10073.$

5. A wholesale tea dealer has 408 kilograms, 468 kilograms and 516 kilograms of three different qualities of tea. He wants it all be packed into boxes of equal size without mixing. Find the capacity of the largest possible box.

a. 50

b. 36

c. 24

d. 12

Ans: D

The capacity of the box is H.C.F. of 408, 468 and 516, i.e. 12.

6. Find the side of the largest square slabs which can be paved on the floor of a room 5 m 44 cm long and 3 m 74 cm broad.

a. 56

b. 42

c. 38

d. 34

Ans: D

The side of the square slab is the H.C.F. of 544 and 374 cm, i.e., 34.

7. A merchant has 435 litres, 493 litres and 551 litres of three different kinds of milk. Find the least number of casks of equal size required to store all the milk without mixing.

a. 51

b. 61

c. 47

d. 45

Ans: A

Since minimum number of casks are required, the size of the cask is greatest.

Also the cask in three cases are of equal size.

The size of the cask is the H.C.F. of 435, 493 and 531 which is 29.

8. Find the greatest number which will divide 2112 and 2792 leaving the remainder 4 in each case.

a. 78

b. 68

c. 65

d. 63

Ans: B

Subtract 4 from each of the numbers 2112 and 2792 and then take the H.C.F. of 2108 and 2788.

9. The largest natural number which exactly divides the product of any four consecutive natural number is

a. 6

b. 12

c. 24

d. 120

Ans: C

1 x 2 x 3 x 4 = 24

$\therefore$ Required number $= 24$.

10. Find the least number which when decreased by 11 is divisible by 14, 15, 21, 32 and 60.

a. 4371

b. 3271

c. 3371

d. 3360

Ans: C

Required number = (L.C.M. of 14, 15, 21, 32, 60) + 11

= 3360 + 11 = 3371.