AILET

Maths: Practice Questions on HCF and LCM for CLAT

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Questions:

Practice Questions on HCF and LCM for CLAT

1. Find the HCF of 2923 and 3239.
2. Find the LCM of 23 * 32 * 52 *7 ; 25 * 53 * 72 ; 22 * 33 * 53 * 11 and 34 * 7 * 113
3. The ratio of two numbers is 3:5, their HCF is 12. Find the numbers.
4. If the product of two co-prime numbers is 117, then find their LCM.
5. The product of the LCM and HCF of two numbers is 48. Difference between the two numbers is 4. Find the greater number among them.
6. LCM and HCF of two numbers are 13 and 455 respectively. If one of the numbers lie between 75 and 125, then find that number.
7. Six bells start toll together and tolls at regular intervals of 2,4,6,8,10 and 12 respectively. In 30 minutes how many times they would have tolled together.
8. Find the least number which when increased by 3 is divisible by each one 24, 32, 36 and 54
9. Find the greatest possible length which can be used to measure lengths 7m, 3m 85cm and 12m 95cm.
10. If N is the greatest number dividing 1305, 4665 and 6905 leaving the same remainder in each case, then Find the sum of digits of N.

Solutions:

1. Ans: 79

2923) 3239 (1

2923

316) 2923 (9

2844

79) 316 (4

316

00

1. Ans: 25 * 33 * 53 * 72 * 113

Select the prime numbers with the highest powers and multiply them.

1. Ans: 36 & 60

Given: Two numbers ratio= 3:4 i.e., numbers => 3x and 4x

HCF = 12; as x is the highest common factor in the above numbers therefore x=12

Numbers => 3*12 =36 & 5*12 = 60

1. Ans: 117

Concept of Co – prime and HCF i.e., HCF of two co-prime numbers is 1

LCM * HCF = Product of two numbers

LCM * 1 = 117 ; LCM = 117

1. Ans: 6

Let two numbers be a and b

Therefore, a*b = 48 ; a-b = 8

Solving above equations we get, a=12 and b=4

1. Ans: 91

Given: LCM = 455 ; HCF=13

Product of numbers = LCM * HCF

=13*455 = 5915

Let the numbers be 13a and 13b ; 13a*13b = 5915

a*b = 35

Co-prime with product 35 are (1,35) and (5,7)

So, the numbers can be (1*13, 35*13) and (5*13, 7*13)

But one of the numbers lie between 75 and 125 that would be 91 giving us a suitable pair i.e., (65,91)

1. Ans: 16

LCM of 2,4,6,8,10 and 12 is 120

Bells toll together after every 120 seconds i.e., 2 minutes

In 30 minutes they will toll together for (30/2 + 1) times i.e., 16 times

1. Ans: 867

LCM (24,32,36,54) = 864

As the question demands divisibility after increment therefore answer would be LCM+3 i.e., 864+3 = 867

1. Ans: 35cm

Given: Lengths = 700cm; 385cm ; 1295cm

HCF = 35cm (greatest possible length for measure = HCF)

1. Ans: 4

N= HCF of (4665-1305), (6905-1305) and (6905-4665)

HCF of 3360, 2240 and 5600

N= 1120

Sum of Digits of N= 1+1+2+0 = 4

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