

7. From above it is clear that 15 and 16 are co-prime because the common factor is 1. Hence pairs 15 and 16, 21, 15, 28 are the co-prime numbers.

8. $93 - 3 = 90$, $111 - 3 = 108$ and $129 - 3 = 126$.
Number of HCF = 90, 108 and 126
And the ans is = 18

Exercise - 8C

1. $2 \overline{) 8, 12, 24}$ And the LCM is = $2 \times 2 \times 3 \times 2 \times 2 = 24$
 $2 \overline{) 4, 6, 12}$ And the LCM ans is = 24
 $3 \overline{) 2, 3, 6}$
R. 1, 3

2. $2 \overline{) 10, 15, 20}$ And the LCM is = $2 \times 2 \times 3 \times 5 = 60$
 $2 \overline{) 5, 15, 10}$ A LCM is = 60
 $3 \overline{) 5, 15, 5}$
 $5 \overline{) 5, 5, 5}$
1, 1, 1

3. $2 \overline{) 3, 6, 9, 12}$ And the LCM is = $2 \times 2 \times 3 \times 3 = 36$
 $2 \overline{) 3, 3, 9, 6}$ = LCM = 36
 $3 \overline{) 3, 3, 9, 3}$
 $3 \overline{) 1, 1, 3, 1}$
1, 1, 1, 1

1. 18, 24, 96

2	18, 24, 96
2	9, 12, 48
2	9, 6, 24
3	9, 3, 12
	3, 1, 4

And the LCM is = $2 \times 2 \times 2 \times 3 \times 3 \times 4$
 LCM = 228

2. 100, 150, 200

2	100, 150, 200
2	50, 75, 100
5	25, 75, 50
5	5, 15, 10
	1, 3, 2

And the LCM is = $2 \times 2 \times 5 \times 5 \times 3 \times 2$
 LCM = 600

3.

2	14, 21, 98
7	7, 21, 49
	1, 3, 7

And the LCM = LCM of 14, 21, 98 = $2 \times 7 \times 7 \times 2$
 = 294

4.

2	22, 121, 33
11	11, 121, 33
	1, 11, 3

LCM of 22, 121, 33 = $2 \times 11 \times 11 \times 3$
 = 726

5.

2	34, 85, 51
3	17, 85, 51
	17, 17, 51

LCM = $2 \times 5 \times 17 \times 17 \times 3$



3. Find the greatest number that will divide
The product of their LCM and HCF = The product
of the number their H.C.F = 50 LCM = 300 LCM =
150 The product of their H.C.F and LCM = 50×300
= 15000

one number = 150

The other number = $\frac{\text{Product LCM and HCF}}$

100

= $\frac{15000}{150}$

= 100 Ans.

4. The product of two numbers = 432

L.C.M = 72

H.C.F = $\frac{\text{Product of two number}}{\text{LCM}}$

= Their product $\frac{432}{72} = 6$
Their L.C.M = $\frac{432}{36} = 12$
H.C.F = 6

5. The product of two number = 19,200

H.C.F = 40

LCM = $\frac{\text{product of two number}}{\text{H.C.F}}$

Their H.C.F = $\frac{19200}{480} = 40$

LCM = 480

6. Find the smallest number which, when divide by
12, 15, 18, 24 and, 36 leaves no remainder

Required number = LCM of 12, 15, 18, 24, or 36

$2 \times 12, 15, 18, 24, 36$

6. The smallest number which when divided by 12, 15, 18, 24 and 36

Required number = HCF LCM of 12, 15, 18, 24, 36
 $= 2 \times 2 \times 2 \times 3 \times 3 \times 5 = \underline{360}$

$$\begin{array}{r|l} 2 & 12, 15, 18, 24, 36 \\ 2 & 6, 15, 9, 12, 18 \\ 3 & 3, 15, 9, 6, 9 \\ 3 & 1, 5, 3, 2, 3 \\ & 1, 5, 1, 2, 1 \end{array}$$

7. Find the smallest number which when increased by 1 is exactly divisible by 12, 18, 24, 32, 40

$$\begin{array}{r|l} 2 & 12, 18, 24, 32, 40 \\ 2 & 6, 9, 12, 16, 20 \\ 2 & 3, 9, 6, 8, 10 \\ 3 & 3, 9, 3, 4, 5 \\ & 1, 3, 1, 4, 5 \end{array}$$

LCM = of 12, 18, 24, 32, and 40
 $= 2 \times 2 \times 2 \times 3 \times 3 \times 4 \times 5$
 $= 1440$ Required number = $1440 - 1 = \underline{1439}$

8. Find the smallest number which when being decreased by 3 is completely divisible by 18, 36, 32, and 27

$$\frac{16}{\times 3} = 8$$

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$$\begin{array}{l} 8. \quad 2 \mid 18, 36, 32, 27 \\ \quad 3 \mid 9, 18, 16, 27 \\ \quad 3 \mid 3, 6, 16, 9 \\ \quad \quad 1, 2, 16, 3 \end{array}$$

$$\begin{aligned} 2 \times 3 \times 3 \times 2 \times 16 \times 3 &= 768 + 3 \\ &= \underline{\underline{771}} \end{aligned}$$