H.W 28/06/2021

Saathi

Date

Exercise 8 (C)

1. i) Multiple of 8 = 8, 16, 24, 32, 40, 48, 56, 64

Multiple of 12 = 12, 24, 36, 48, 60, 72, 84, 96

Multiple of 24 = 24, 48, 72, 96, 120, 144, 168

LCM of 8, 12 and 24 = 24

iii) Multiple of 10 = 10, 20, 30, 40, 50, 60, 70

Multiple of 15 = 15, 30, 45, 60, 75, 90, 105

Multiple of 20 = 20, 40, 60, 80, 100, 120

LCM of 10, 15 and 20 = 60

iii) Multiple of 3 = 3, 6, 9, 12, 15, 18, 21, 24, 27

Multiple of 6 = 6, 12, 18, 24, 30, 36, 42, 48, 54

Multiple of 9 = 9, 18, 27, 36, 45, 54, 63, 72, 81

Multiple of 12 = 12, 24, 36, 48, 60, 72, 84, 96

LCM of 3, 6, 9 and 12 = 36

2. i) $18 = 2 \times 3 \times 3$

$24 = 2 \times 2 \times 2 \times 3$

$96 = 2 \times 2 \times 2 \times 2 \times 2 \times 3$

LCM of 18, 24 and 96 = $2 \times 3 \times 2 \times 2 \times 2 \times 2 \times 3 = 288$

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iii) 2 | 100, 150, and 200
5 | 50, 75, 100
5 | 10, 5, 20
2 | 2, 1, 4
1, 1, 2

The common of 100, 150 and 200 = 2 X 5 X 5 X 2

1 X 1 X 2 = 200

iii) 14 7 | 14, 21, 98
2 | 2, 3, 14
1, 3, 7

The common of 14, 21 and 98 = 7 X 2 X 1 X 3 X 7

= 294

iv) 11 | 22, 121, 33
2, 11, 3

The common of 22, 121, 33 = 11, 2, 11, 3 =

726.

v) 17 | 34, 85, 51
2, 5, 3

The common of ~~17, 2, 5, 3~~ 34, 85, 51 = 17 X 21

5 X 3 = 510

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3. ~~HC~~ H.C.F X L.C.M of two number = Product of two number

$\frac{H.C.F \times L.C.M}{One\ number}$ = The other number

$\frac{50 \times 300}{150} = \frac{15000}{150}^{100}$ = other number.

So here 100 is the other number.

4. Product of two number = 432

their LCM is 72

their HCF = $\frac{\text{Their product}}{\text{their LCM}} = \frac{432}{72}$

HCF = 6

5. The product of two number = 19,200

their HCF = 40

their LCM = $\frac{\text{Their product}}{\text{their HCF}} = \frac{19,200}{40}$

LCM = 480

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6.

3	12, 15, 18, 24, 36
2	4, 5, 6, 8, 12
2	2, 5, 3, 4, 6
3	1, 5, 3, 2, 3
	1, 5, 1, 2, 1

LCM = 3 X 2 X 2 X 3 X 1 X 5 X 1 X 2 X 1 = 360

So, 360 is the smallest number which, when divided by 12, 15, 18, 24, 36 leaves ~~to~~ no remainder.

7. Smallest number which, when increased by ~~mat~~ one is divisible by 12, 18, 24, 32 and 40

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

LCM = 2 X 2 X 2 X 3 X 1 X 3 X 1 X 4 X 5 = 1440

1440 is increasing by one

So, the smallest number is = ~~1440~~

1440 - 1 = 1439

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8.

2	18, 36, 32, 27
3	9, 18, 16, 27
3	3, 6, 16, 9
2	1, 2, 16, 3
	1, 2, 8, 3

LCM = 2 x 3 x 3 x 2 x 1 x 1 x 8 x 3 = 864

but, smallest number decrised by three = 864 + 3 = 867