28/6/22
HW

Ex 8 (C)

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

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

M of 24 = 24, 48, 56, 80, 104

CM = 24, 48,

LCM = 24

ii) M of 10 = 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

M of 15 = 15, 30, 45, 60, 75, 90, 105, 120, 135, 150

M of 20 = 20, 40, 60, 80, 100, 120, 140

CM = 60, 120

LCM = 60

iii) M of 3 = 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36

M of 6 = 6, 12, 18, 24, 30, 36, 42, 48, 54, 60

M of 9 = 9, 18, 27, 36, 45, 54, 63, 72, 81, 90

M of 12 = 12, 24, 36, 48, 60, 72, 84, 96.

CM = 36

LCM = 36

2 i)

18	24	96
2 | 18	2 | 24	2 | 96
3 | 9	2 | 12	2 | 48
3	2 | 6	2 | 24
	3	2 | 12
		2 | 6
		3

18 = 2 x 3 x 3

24 = 2 x 2 x 2 x 3

96 = 2 x 2 x 2 x 2 x 2 x 3

LCM = $2^5 \times 3^2 = 288$

18, 24, 96
3 | 9, 12, 48
2 | 3, 4, 16
2 | 3, 2, 8
2 | 3, 1, 4
3, 1, 2

LCM = 2 x 2 x 2 x 2 x 2 x 3 x 3

= 288

ii)

2 | 100
2 | 50
5 | 25
5

2 | 150
3 | 75
5 | 25
5

2 | 200
2 | 100
2 | 50
3 | 25
5

100 = 2 × 2 × 5 × 5
150 = 2 × 3 × 5 × 5
200 = 2 × 2 × 2 × 5 × 5
LCM = 5 × 5 × 2 × 3 × 2 × 2
= 600

2 | 100, 150, 200
5 | 50, 75, 100
5 | 10, 15, 20
2 | 2, 3, 4
1, 3, 2

LCM = 2 × 2 × 3 × 5 × 5 × 2
= 600

iii)

2 | 14
7

3 | 21
7

2 | 98
7 | 49
7

14 = 2 × 7
21 = 3 × 7
98 = 2 × 7 × 7
LCM = 7 × 7 × 2 × 2 × 3
=

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

LCM = 2 × 3 × 7 × 7
= 294

iv)

2 | 22
11

11 | 121
11

3 | 33
11

33 = 3 × 11
22 = 2 × 11
121 = 11 × 11
LCM = 2 × 3 × 11 × 11
= 726

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

LCM = 11 × 11 × 2 × 3
= 726

v) $2\overline{)34}$ $5\overline{)85}$ $5\overline{)85}$ $3\overline{)51}$ $17\overline{)17}$

$34 = 2 \times 17$
$85 = 5 \times 5 \times 17$
$51 = 3 \times 17$
$LCM = 17 \times 2 \times 3 \times 5 = 510$

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

$2\overline{)34, 85, 51}$
$5\overline{)17, 85, 51}$
$17\overline{)17, 17, 51}$
$1, 1, 3$

$LCM = 2 \times 5 \times 17 \times 17$
$= 510$

3) $HCF = 50$
$LCM = 300$
1^{st} no $= 150$
2^{nd} no $= \frac{LCM \times HCF}{1^{st} \text{ no}}$ $= \frac{300 \times 50}{150} = 100$
3
so the 2^{nd} no $= 100$

4. Product of 2 no $= 432$
$LCM = 72$
$HCF = \frac{\text{Product}}{LCM} = \frac{432}{72} = 6$

5. Product of 2 no $= 19,200$
$HCF = 40$
$LCM = \frac{\text{Product of 2 no}}{HCF} = \frac{19,200}{40} = 480$

6. $3\overline{)12, 15, 18, 24, 36}$
$2\overline{)4, 5, 6, 8, 12}$
$2\overline{)2, 5, 3, 4, 6}$
$3\overline{)1, 5, 3, 2, 3}$
$1, 5, 1, 2, 1$

$LCM = 2 \times 2 \times 2 \times 3 \times 3 \times 5$
$= 360$

7. 2 | 12, 18, 24, 32, 40
2 | 6, 9, 12, 16, 20
2 | 3, 9, 6, 8, 10
2 | 3, 9, 3, 4, 5
3 | 3, 9, 3, 2, 5
1, 3, 1, 2, 5

LCM = 2×2×2×2×2×3×3×5
= 1440

So the number exactly divisible :
= 1440 − 1 = 1439.

8. 2 | 18, 36, 32, 27
2 | 9, 18, 16, 27
2 | 9, 9, 8, 27
3 | 9, 9, 4, 27
2 | 3, 3, 4, 9
3 | 3, 3, 2, 9
1, 1, 2, 3

LCM = 2×2×2×3×2×2×3×3
= 864

So the number exactly divisible
= 864 + 3 = 867.