C.W

~~28/6/21~~

Revision exercise chap-8

1) i) 108, 288, 420

A)

2	108
2	54
3	27
3	9
	3

2	288
2	144
2	72
2	36
2	18
3	9
	3

2	420
2	210
5	105
3	21
	7

2 × 2 × 3 × 3 × 3

2 × 2 × 2 × 2 × 2 × 3 × 3

2 × 2 × 5 × 3 × 7

H.C.F ⇒ 2 × 2 × 3 = 12

ii) 36, 54, 138

A)

2	36
2	18
3	9
	3

2	54
3	27
3	9
	3

2	138
3	69
	23

2 × 2 × 3 × 3

2 × 3 × 3 × 3

2 × 3 × 23

2 × 3 = 6

(2) i) 72, 80, 252

Ans

2 | 72	2 | 80	2 | 252
2 | 36	2 | 40	2 | 126
2 | 18	2 | 20	3 | 63
3 | 9	2 | 10	3 | 21
3	5	7

$72 = 2\times2\times2\times3\times3 = 2^3\times3^2$

$80 = 2\times2\times2\times2\times5 = 2^4\times5^1$

$252 = 2\times2\times3\times3\times7 = 2^2\times3^2\times7$

$LCM = 2^4\times3^2\times5\times7$

$= 16\times9\times5\times7$

$= 5,040$

ii) Ans $48 = 2\times2\times2\times2\times3 = 2^4\times3$

$66 = 2\times3\times11 = 2^1\times3^1\times11$

$120 = 2\times2\times2\times3\times5 = 2^3\times3\times5$

$LCM = 2^4\times3\times11\times5$

$= 2\times2\times2\times2\times3\times11\times5$

$= 2640$

(3) Hw Complete ex-(ch-8) Revision exercise

(3) i) True: Because the prime numbers have no common factor except 1.

ii) True: Because co-primes have no common factor except 1.

iii) True: Because the prime number have no common factor except 1.

iv) True: Because co-prime numbers have no common factor except 1.

(4) A) We know that : Product of two nos = product of their H.C.F and L.C.M.

* Product of two nos = 12096
* H.C.F is : 36
* L.C.M ⇒ 12096 ÷ 36 = (336)

(5) A) We know that : Product of two nos = Product of their H.C.F and L.C.M.

* Product of H.C.F and L.C.M = 1152
* 1st no. 48
* 2nd no. = 1152 ÷ 48 = (24)

(6) A) i) 2 | 28, 42
2 | 14, 21
7 | 7, 21
1, 3

2 × 2 × 7 × 3 = (84)

ii) 2 | 28 , 2 | 42
2 | 14 , 3 | 21
7 , 7

= (2 × 2 × 7) / (2 × 3 × 7) = 2 × 7 = (14)

(7) A) LCM = 2 | 140, 168
2 | 70, 84
7 | 35, 42
5, 6

= 2 × 2 × 7 × 5 × 6 = (840)

We know that : Product of two nos = Product of their H.C.F and L.C.M.

H.C.F = (1st no. × 2nd no.) / LCM = (140 × 168) / 840 = (28)

A) (840 and 28.) ✓

(8) A⇒ Numbers are 108 and 450

H.C.F = ~~108) 450 (4~~

$$
\begin{array}{r}
108\overline{)450}\,(4 \\
-432 \\
\hline
18\overline{)108}\,(6 \\
-108 \\
\hline
0
\end{array}
$$

= 18

We know that: Product of two no.s = Product of their H.C.F and L.C.M.

$$LCM = \frac{1st\ no. \times 2nd\ no.}{H.C.F} = \frac{108 \times 450}{18} = 2700$$

A⇒ 18 and 2700