RW Excercise

6) i) Find the smallest no. that is completely divisible by 28 and 42.

Ans) LCM of 28 and 42 is $2 \times 7 \times 2 \times 3 = 84$

$$\begin{array}{r|l} 2 & 28, 42 \\ 7 & 14, 21 \\ & 2, 3 \end{array}$$

So the smallest no. that is completely divisible by 28 and 48 is 84

ii) Find the largest no. that can divide 28 and 42 completely.

Ans) HCF of 28 and 42 is 14

So, the largest no. is 14.

$$28)\,42\,(1$$
$$\underline{28}$$
$$14)\,28\,(2$$
$$\underline{28}$$
$$00$$

1) Find the HCF of:

i) 108, 288 and 420

Ans

$$108)\,288\,(2$$
$$\underline{216}$$
$$072)\,108\,(1$$
$$\underline{72}$$
$$36)\,72\,(2$$
$$\underline{72}$$
$$00$$

$$36)\,420\,(11$$
$$\underline{36}$$
$$60$$
$$\underline{36}$$
$$24)\,36\,(1$$
$$\underline{24}$$
$$12)\,24\,(2$$
$$\underline{24}$$
$$00$$

HCF = 12

ii) 36, 54 and 138

Ans)

```
36)54(1          36)138(3
  36               108
  18)36(2          030)36(1
    36               30
    00               06)30(5
                       30
                       00
```

HCF = 6

2) Find the L.C.M of:

i) 72, 80 and 252

Ans

```
2| 72, 80, 252
2| 36, 40, 126
2| 18, 20, 63
3| 9, 10, 63
3| 3, 10, 21
   1, 10, 7
```

LCM = $2^3 \times 3^2 \times 10 \times 7$

$8 \times 9 \times 70$

72×70

$= 5040$

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2)ii) 48, 66 and 120

2 | 48, 66, 120
3 | 24, 33, 60
2 | 8, 11, 20
2 | 4, 11, 10
2, 11, 5

LCM = 2 x 3 x 2 x 2 x 2 x 11 x 5 = 2640

4) The product of two no. is 12096 and their H.C.F is 36. Find their LCM.

Product of the 2 nos. = HCF x LCM
HCF = 36
LCM = $\frac{12096}{36}$ = 336

5) Ans) Product of 2 nos. = HCF x LCM
HCF - one no = 48
Other no = $\frac{1152}{48}$ = 24

6) Ans) LCM of 140, 168

2 | 140, 168
2 | 70, 84
7 | 35, 42
5, 6

LCM = 2 x 2 x 7 x 5 x 6
840

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HCF =

140) 168 (1
140
028) 140 (5
140
000

~~HCE~~
HCF = 28

8)
Ans) ~~108) 450 (3~~
~~324~~
~~126) 108 (~~

HCF = 18

HCF

108) 450 (4
432
018) 108 (6
108
000

LCM =

2 | 108, 450
3 | 54, 225
3 | 18, 75
| 6, 25

LCM = $2 \times 3^2 \times 6 \times 25$
= 2700