HW

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Revision Exercise (ch-8)

1) Find the HCF of i) 108, 288 and 420

108	288	420
2 | 108	2 | 288	2 | 420
2 | 54	2 | 144	2 | 210
3 | 27	2 | 72	3 | 15
3 | 9	2 | 36	5
3	2 | 18	
	3 | 9	
	3	

$108 = 2 \times 2 \times 3 \times 3 \times 3$

$288 = 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3$

$420 = 2 \times 2 \times 3 \times 5$

HCF $= 2 \times 2 \times 3 = 12$

ii) 36, 54 and 138

36	54	138
2 | 36	2 | 54	2 | 138
2 | 18	3 | 27	2 | 64
3 | 9	3 | 9	2 | 32
3	3	2 | 16
		2 | 8
		2 | 4
		2

$36 = 2 \times 2 \times 3 \times 3$

$54 = 2 \times 3 \times 3 \times 3$

$138 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$

HCF $= 2$

2) Find the LCM of

i) 72, 80 and 252

78, 80

2	78, 80, 252
2	39, 40, 126
3	39, 20, 63
	13 20 21

LCM = 2 x 2 x 3 x 13 x 20 x 21
= 65,520

ii) 48, 66, and 120

2	48, 66, 120
2	24, 33, 60
2	12, 33, 30
3	6, 33, 15
	2, 11, 5

LCM = 2 x 2 x 2 x 3 x 2 x 5 x 11
= 2,640

3) State true or false.

i) HCF of two prime numbers is 1. True.

(5 and 11 are two prime numbers and their HCF is = 1)

ii) HCF of two co-prime numbers is 1 - True
(4 and 9 are two co-prime numbers and their HCF is 1)

iii) LCM of two prime numbers is equal to their product - True (5 and 11 are prime numbers and their LCM = 5 X 11 = 55)

iv) LCM of two co-prime numbers is equal to their product. True (4 and 9 are two co-prime numbers and then LCM = 4 X 9 = 36)

4) The product of two numbers is 12096 and their HCF is 36. Find their LCM.

Ans- Product = 12096
HCF = 36
LCM = ?

$$LCM = \frac{Product}{HCF} = \frac{12096}{36} = 336$$

5) The product of the HCF and LCM are numbers is 1152 If one number is 48 find the another.

Ans- Product of HCF and LCM = 1152
One number = 48

Another number = $\frac{\text{HCF} \times \text{LCM}}{\text{One number}}$ = other number

$= \frac{1152}{48} = 24$ = other number

6) i) Find the smallest numbers that is completely divisible by 28 and 42.

Ans- 84 is LCM of given numbers.

ii) Find the largest number that can divide 28 and 42 completely.

Ans- 14 is the HCF of given numbers

7) Find the LCM of 140 and 168. Use the LCM. obtained to find the HCF of the given numbers.

Ans- 840 and 28

8) Find the HCF of 108 and 450 and use the HCF obtained to find the LCM of the given numbers.

Ans- 18 and 2700