Bhaswan Sardar

29.06.2021

Mathematics

1. Find the HCF of :

(i) 108, 288 and 420

2	108, 288, 420
2	54, 144, 210
3	27, 72, 105
	9, 24, 35

HCF = 2 x 2 x 3

= 12

ii) 36, 54 and 138

2	36, 54, 138
3	18, 27, 69
	6, 9, 23

HCF = 2 x 3

= 6

2. Find the HCF L.C.M of.

i) 72, 80 and 252

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 x 2 x 2 x 3 x 3 x 10 x 7

= 5040

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 11 x 5

= 240

3. State true or false

(i) H.C.F of two prime numbers is 1.

True. 7 and 11

ii) H.C.F of two co-prime numbers is 1. → True. Exa- 4 and 9.

iii) L.C.M. of two prime numbers is equal to their product → true

Exa: 7 and 13

their LCM = 7 × 13 = 91

iv) L.C.M. of two co-prime numbers is equal to their product - True

Exa - 5 and 9

their L.C.M = 5 × 9 = 45

4 The product of two numbers = 12096

Their H.C.F = 36

∴ Their L.C.M. = 12096 ÷ 36

= 336

5. The product of the H.C.F and the L.C.M. of two numbers = 1152

one number = 48

∴ Another number = 1152 ÷ 48

= 24

6. ~~i) I find the~~ smallest

6. i) The smallest number that is completely by 28 and 42 = Their LCM

= 2 × 7 × 2 × 3

= 84

2	28, 42
7	14, 21
	2, 3

7. ii) The largest number that can divided 28 and 42 = their HCF

= 2 × 7

= 14

7. L.C.M. of 140 and 168 = 2 x 2 x 7 x 5 x 6
= 840

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

b. We know,
HCF x LCM = product of the numbers

∴ HCF x 840 = 140 x 168

∴ HCF = $\frac{140 \times 168}{840}$

$= \frac{28}{6}$

= 28

8. H.C.F of 108 and 450 = 2 x 3 x 3
= 18

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

We know,
HCF x LCM = product of the numbers

∴ 18 x LCM = 108 x 450

∴ LCM = $\frac{108 \times 450}{18}$

= 900