Revision Exercise (Chapter 2)

1. i) 108, 288 and 420; Find the HCF

108 | 288 | 2
-216
72 | 108 | 1
-72
36 | 72 | 2
-72
0

HCF of 108 and 288 = 36

36 | 420 | 11
-36↓
60
-36
24 | 36 | 1
-24
12 | 24 | 2
-24
0

∴ HCF of 108, 288 and 420 = 12

ii) 36, 54 and 138

36 | 54 | 1
-36
18 | 36 | 2
-36
0

18 | 138 | 7
-126
12 | 18 | 1
-12
6 | 12 | 2
-12
0

∴ HCF of 138, 54 and 36 = 6

3. i) True (5 and 3 are two prime numbers and their H.C.F is 1)

ii) True (5 and 6 are co-prime numbers and their H.C.F is 1)

iii) True (5 and 11 are prime numbers and their L.C.M = 11 x 5 = 55)

iv) True (16 and 28 are two coprime numbers and their L.C.M = 16 x 28 = 448)

4. Product of two numbers = 12096

HCF = 36

$$L.C.M = \frac{\text{Product of two numbers}}{H.C.F} = \frac{12096}{36}$$

= 336

∴ Hence the L.C.M = 336

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1152
LCM = 12
HCF = Product of two numbers
L.C.M

72 | 432
×192
0

∴ HCF = 6

5 The product of two numbers = 19200
H.C.F = 40
L.C.M = Product of two numbers
H.C.F

40 | 19200
160
320
320
00
0
0

6
8 | 12, 15, 18, 24, 36
2 | 4, 5, 6, 8, 12
2 | 2, 5, 3, 4, 6
2 | 1, 5, 3, 2, 3
3 | 1, 5, 3, 1, 3
5 | 1, 5, 1, 1, 1
1, 1, 1, 1,

LCM = 3×2×2×2×3×5

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 = 2x2x2x3x2x3x2x5 = 1440

This can be written as 1440^{+1}

2	18, 36, 32, 27
3	9, 18, 16, 27
3	3, 6, 16, 9
2	1, 2, 16, 3
2	1, 1, 8, 3
2	1, 1, 4, 3
	1, 1, 2, 3

LCM = 3x3x2x2x2x2x3x2 = 864 or

It can be written as 864^{-3}