HW 6 29

Revision

1. Find the HCF

(i) 108, 228 & 420

ans

108) 228 (2
-216
012) 216 (18
-120
096) 120 (1
96
24) 96 (4
-84
12) 84 (7
-84
00

228) 420 (1
-228
192) 228 (1
-192
36) 192 (5
-180
012) 180 (15
-120
60) 120 (2
-120
00

HCF of 108, 228, 420 is 12

(ii) 36, 54, 138

ans

36) 54 (1
-36
18) 36 (2
-36
00

54) 138 (2
-108
30) 108 (3
90
18) 90 (5
-90
00

So the HCF of 36, 54, 138 is 18

2. Find the LCM

i) 72, 80, 252

ans

2	72, 80, 252
2	36, 40, 126
2	18, 20, 63
3	9, 10, 63
3	3, 10, 21
5	1, 10, 7
	1, 2, 7

~~2x2x2~~

LCM = 2x2x2x3x3x5x2x7

= 5040

1	
720	
x	7
5040	
240	240
x	11
2640	2640

(ii) 48, 66, 120

ans

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

LCM = 2x2x2x2x3x5x11

= 2640

3. State true or false (Give an example in support of your answer)

(i) HCF of 2 prime numbers is 1

(ii) HCF of 2 co-prime is 1

(iii) LCM of 2 prime number is equal to the product.

(iv) LCM of 2 co prime numbers is equal to the products.

(i) ans true ex $5 \& 11 = 11 = 1 \times 11$

$5 = 1 \times 5$

(i) ans true 7 & 11 = 11 = 0, 11
7 = 0, 7

(ii) ans true 3 & 7 = 21
7 = 7, 14, 21
3 = 3, 6, 9, 12, 15, 18, 21

(iv) ans true 5 & 7 = 35
7 = 7, 14, 21, 28, 35
5 = 5, 10, 15, 20, 25, 30, 35

1. product = 1296 = 336
HCF = 36
LCM = 336

3 product of HCF & LCM = 1152 → 24
= 48
one number
other number = 24

6: i) 28, 42
2 | 28, 42
7 | 14, 21
3, 3
2 & 2 & 7 = 84

6: ii) 2 | 28, 42
7 | 14, 21
3, 3
2 & 7 = 14

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

$2^2 \times 5 \times 6 \times 7 = 840$

140
× 168
23520
840 = 28

HCF = 28 LCM = 840

8. 2 | 180, 450
5 | 90, 225
9 | 18, 45
2, 5

~~$2 \times 5 \times 9 = 90$~~ $2 \times 5 \times 9 = 90 \div 9 = 18$

HCF = 18

180
× 450
81000 = 4500
18

LCM = 4500

HCF = 18