Swarit Maths
class-VI sec-B

Date
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1. (i) 16 and 35

16 = 1, 2, 4, 8, 16
35 = 1, 5

hcf = 1

(ii) 25 and 20

25 = 5 × 5 = 1, 5, 25
20 = 4 × 5 = 1, 5, 4, 20

hcf = 5

(iii) 27 and 75

27 = 1, 3, 9, 27
75 = 1, 3, 5, 75, 25, 15

hcf = 3

(iv) 8, 12, 18

8 = 1, 2, 4, 8
12 = 1, 2, 3, 4, 6, 12
18 = 1, 2, 3, 6, 9, 18

hcf = 2

(v) 24, 36, 45, 60

24 - 1, 2, 3, 4, 6, 8, 12, 24
36 = 1, 2, 3, 4, 6, 12, 18, 36

45 = 1, 5, 9, 15

Hcf = 4

2. (i) 5 and 8

5 = 1 × 5

8 = 2 × 2 × 2

hcf = 1

(ii) 24 and 49

24 = 2 × 2 × 2 × 3

49 = 7 × 7

Hcf = 1

(iii) 40, 60 and 80

40 = 2 × 2 × 2 × 5

60 = 2 × 2 × 3 × 5

80 = 2 × 2 × 2 × 2 × 5

2 × 2 × 5 = 20

2	60
2	30
3	15
	5

(iv) 48, 44, ~~48~~ 88

2	48
2	24
2	12
2	6
	3

2	44
2	22
	11

2	88
2	44
2	22
	11

2	80
2	40
2	20
2	10
	5

$48 = 2 \times 2 \times 2 \times 2 \times 3$

$44 = 2 \times 2 \times 11$

$88 = 2 \times 2 \times 2 \times 11$

Hcf $= 2 \times 2 = 4$

(v) 12, 16 and 28

2 | 12	2 | 16	2 | 28
2 | 6	2 | 8	2 | 14
3	2 | 4	7
	2	

$12 = 2 \times 2 \times 3$

$16 = 2 \times 2 \times 2 \times 2$

$28 = 2 \times 2 \times 7$

Hcm: $2 \times 2 = 4$

3. (i) 16 and 24

$$\begin{array}{r|l} & 1 \\ 16 & 24 \\ & 16 \quad 2 \\ \hline & 8 \mid 16 \\ & 16 \\ \hline & 0 \end{array}$$

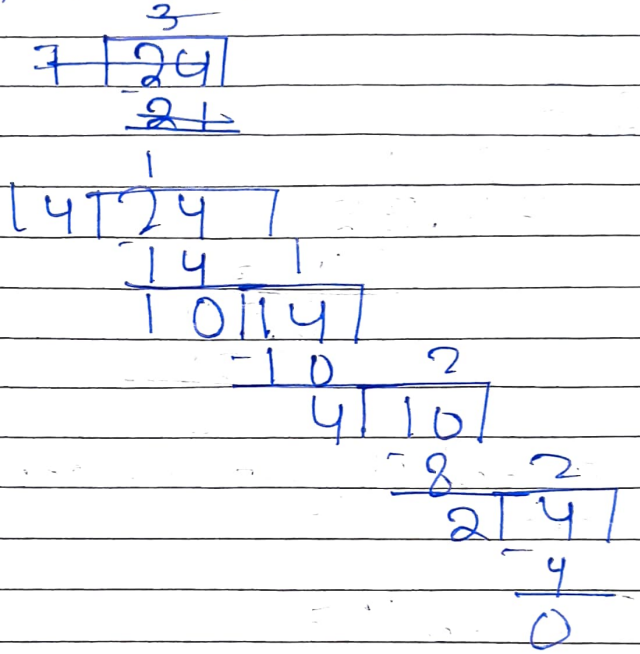
Hcf = 8

(ii) 18 and 30

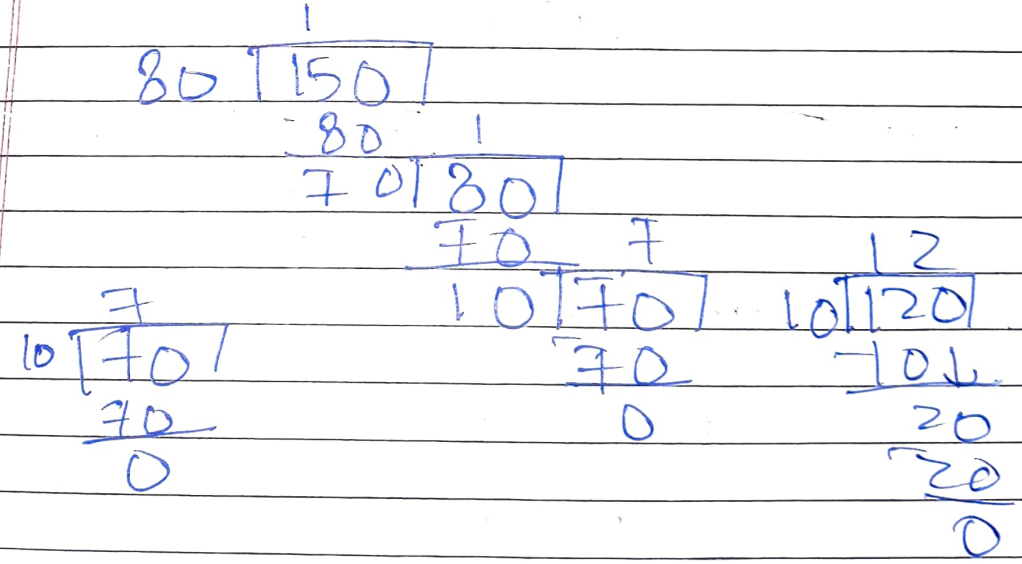
$$\begin{array}{r|l} & 1 \\ 18 & 30 \\ & 18 \quad 1 \\ \hline & 12 \mid 18 \\ & 12 \quad 2 \\ \hline & 6 \mid 12 \\ & 12 \\ \hline & 0 \end{array}$$

Hcf = 6

(iii) 7, 14 and 24



(iv) 70, 80, 120, 150



(v) 32, 56, 46

32) 56 (1
-32
24) 32 (1
-24
8) 24 (3
-24
0

4. Use a method of your own choice to find the hcf.

(i) 45, 75 and 135

75) 135 (1
-75
60) 75 (1
-60
15) 60 (4
-60
0

Hcf = 15

(ii) 48, 36 and 96

~~48) 96~~

36) 96 (2
-72
24) 36 (1
-24
12) 24 (2
-24
0

(iii) 66, 33 and 132

$66 = 2 \times 3 \times 11$

$132 = 2 \times 2 \times 3 \times 11$

$33 = 3 \times 11$

$\therefore$ Hcf $= 11 \times 3 = 33$

(iv) 24, 36, 60 and 132

Hcf = 12

(v) 30, 60, 90 and 105

Hcf = 15

5. 180 | 315 | 1
180 | 1
135 | 180
135 | 3
45 | 135
135
0

Ans = 45

6. Show that 45 and 56 are coprime numbers.

45 = 5 × 3 × 3
56 = 2 × 2 × 2 × 7

45 and 56 doesn't have any common factor. Numbers that doesn't have any common factors are called co-prime numbers.

7. Out of 15, 16 and 21 and 28 find out all the pairs of co-prime numbers.

Ans - 16, 15 21, 28

16, 21 15, 28

8. Find the greatest number that will divide 93, 111 and 129, leaving remainder 3 in each case.

93 - 3 = 90
111 - 3 = 108
129 - 3 = 126

90 | 126
90 | 2
36 | 90
72 | 2
18 | 36
36
0

Ans = 18

CW - 24/6/2021

Product of two numbers = Hcf x lcm

$A \times B = Hcf \times lcm$

(i) $A = \frac{Hcf \times lcm}{B}$

(ii) $B = \frac{Hcf \times Lcm}{A}$

$Hcf = \frac{A \times B}{lcm}$

$Lcm = \frac{A \times B}{Hcf}$

(i) Ex: 10 and 15

Hcf: 5 | 10, 15
2, 3

Hcf = 5
Lcm = 30

(ii) A = ? B = 15

Hcf = 5 lcm = 30

$A = \frac{Hcf \times lcm}{B}$

$A = \frac{5 \times 30}{15} = A = 10$

A = 10, B = ?
Hcf = 5 lcm = 30

$B = \frac{Hcf \times lcm}{A}$

$A = \frac{5 \times 30}{10} = 15$

B = 15

A = 10 B = 15
Hcf = ? lcm = 30

$$\text{Hcf} = \frac{A \times B}{\text{lcm}} \quad = \quad A = \frac{10 \times 15}{30} = 5$$

(iv) A = 10, B = 15, Hcf 15 lcm?

$$\text{Lcm} = \frac{A \times B}{\text{Hcf}} = \frac{10 \times 15}{5} = 30$$