

$$8) 93 - 3 = 90$$

$$111 - 3 = 108$$

$$129 - 3 = 126$$

HCF of 90, 108, 126

$$\begin{array}{r} 90 \overline{) 108} \quad 1 \\ \underline{90} \\ 18 \overline{) 90} \quad 5 \\ \underline{90} \\ 0 \end{array}$$

$$\begin{array}{r} 18 \overline{) 126} \quad 7 \\ \underline{126} \\ 0 \end{array}$$

The greatest number will be 18.

Exercise - 8(c)

$$i) 4 \overline{) 8, 12, 24}$$

$$3 \overline{) 2, 3, 6}$$

$$2 \overline{) 2, 1, 2}$$

$$1, 1, 1$$

$$LCM = 4 \times 3 \times 2 = 24$$

$$ii) 2 \overline{) 10, 15, 20}$$

$$2 \overline{) 5, 15, 10}$$

$$5 \overline{) 5, 15, 5}$$

$$1, 3, 1$$

$$LCM = 2 \times 2 \times 5 \times 3 = 60$$

$$iii) 3 \overline{) 3, 6, 9, 12}$$

$$2 \overline{) 1, 2, 3, 4}$$

$$1, 1, 3, 2$$

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

~~Exercise - 8(c)~~

Prime factor method

(21) $18 = 2 \times 3 \times 3$
 $24 = 2 \times 2 \times 2 \times 3$
 $96 = 2 \times 2 \times 2 \times 2 \times 2 \times 3$
 $LCM = 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3 = 288$

Division method

$$\begin{array}{r|l} 2 & 18, 24, 96 \\ \hline 2 & 9, 12, 48 \\ \hline 2 & 9, 6, 24 \\ \hline 3 & 9, 3, 12 \\ \hline & 3, 1, 4 \end{array}$$

$LCM = 2 \times 2 \times 2 \times 3 \times 3 \times 4 = 288$

ii) $100 = 2 \times 2 \times 5 \times 5$
 $150 = 2 \times 3 \times 5 \times 5$
 $200 = 2 \times 2 \times 2 \times 5 \times 5$
 $LCM = 2 \times 2 \times 2 \times 3 \times 5 \times 5 = 600$

$$\begin{array}{r|l} 2 & 100, 150, 200 \\ \hline 2 & 50, 75, 100 \\ \hline 5 & 25, 75, 50 \\ \hline 5 & 5, 15, 10 \\ \hline & 1, 3, 2 \end{array}$$

$LCM = 2 \times 2 \times 5 \times 5 \times 3 \times 2 = 600$

iii) $14 = 2 \times 7$
 $21 = 3 \times 7$
 $98 = 2 \times 7 \times 7$
 $LCM = 2 \times 3 \times 7 \times 7 = 294$

$$2 \mid 14, 21, 98$$

$$7 \mid 7, 21, 49$$

$$1, 3, 7$$

$$LCM = 2 \times 7 \times 3 \times 7 = 294$$

iv) $22 = 2 \times 11$

$$121 = 11 \times 11$$

$$33 = 3 \times 11$$

$$LCM = 2 \times 3 \times 11 \times 11 = 726$$

v) $2 \mid 22, 121, 33$

$$11 \mid 11, 121, 33$$

$$1, 11, 3$$

$$LCM = 2 \times 11 \times 11 \times 3 = 726$$

vi) $34 = 2 \times 17$

$$85 = 5 \times 17$$

$$51 = 3 \times 17$$

$$LCM = 2 \times 5 \times 3 \times 17 = 510$$

$$2 \mid 34, 85, 51$$

$$17 \mid 17, 85, 51$$

$$1, 5, 3$$

3) $HCF = 50$

$$LCM = 300$$

$$\text{Product of HCF and LCM} = 300 \times 50 = 15000$$

$$\text{One number} = 150$$

$$\text{Other number} = \frac{LCM \times HCF}{\text{One number}} = \frac{15000}{150} = 100$$

Ans

4) Product of two number = Product of their HCF and LCM.
Product of two numbers = 432

$$\text{LCM} = 72$$

$$\text{HCF} = \frac{432}{72} = 6$$

5) Product of two number = Product of their LCM and HCF.
Product of two numbers = 19200

$$\text{HCF} = 40$$

$$\text{LCM} = \frac{19200}{40} = 480$$

6) The least number is their LCM.

2	12	15	18	24	36
2	6	15	9	12	18
3	3	5	3	4	6
3	1	5	3	2	3
	1	5	1	2	1

$$\text{LCM} = 2 \times 2 \times 3 \times 3 \times 5 \times 2 = 360$$

Required number = 360.

7)

2	12	18	24	32	40
2	6	9	12	16	20
3	3	9	6	8	10
3	3	9	3	4	5
	1	3	1	4	5

$$\text{LCM} = 2 \times 2 \times 3 \times 3 \times 3 \times 4 \times 5 = 1440 \text{ (increased by one)}$$

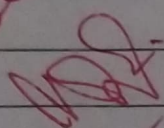
$$\text{Required number} = 1440 - 1 = 1439$$

for

8)	2	18	36	32	27
	2	9	18	16	27
	3	9	9	8	27
	3	3	3	8	9
		1	1	8	3

$$= 2 \times 2 \times 3 \times 3 \times 8 \times 3 = 864$$

$$\text{Required no} = 864 + 3 = 867$$

Seen

 //