

25/6/21
HW

Ex - 8(B)

i) F of 16 = 1, 2, 4, 8, 16
F of 35 = 1, 5, 7, 35
CF = 1
HCF = 1

ii) ~~F of 25~~ F of 25 = 1, 5, 25
~~F of 20~~ F of 20 = 1, 2, 4, 5, 10, 20
CF = 1, 5
HCF = 5

iii) F of 27 = 1, 3, 9, 27
F of 75 = 1, 3, 5, 15, 25, 75
CF = 1, 3
HCF = 3

iv) F of 8 = 1, 2, 4, 8
F of 12 = 1, 2, 3, 4, 6, 12
F of 18 = 1, 2, 3, 6, 8, 18
CF = 1, 2
HCF = 2

v) F of 24 = 1, 2, 3, 4, 6, 8, 12, 24
F of 36 = 1, 2, 3, 4, 6, 9, 12, 18, 36
F of 45 = 1, 3, 5, 9, 15, 45
F of 60 = 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60
CF = 1, 3
HCF = 3

2i)
$$\begin{array}{r} 5 \overline{) 5} \\ 1 \end{array}$$

$$\begin{array}{r} 2 \overline{) 8} \\ 2 \overline{) 4} \\ 2 \end{array}$$

$$\begin{array}{l} \text{F of } 5 = 1 \times 5 \\ \text{F of } 8 = 1 \times 2 \times 2 \times 2 \\ \text{CF} = 1 \\ \text{HCF} = 1 \end{array}$$

ii)
$$\begin{array}{r} 2 \overline{) 24} \\ 2 \overline{) 12} \\ 2 \overline{) 6} \\ 3 \end{array}$$

$$\begin{array}{r} 7 \overline{) 49} \\ 7 \end{array}$$

$$\begin{array}{l} \text{F of } = 2 \times 2 \times 2 \times 3 \\ \text{F of } = 7 \times 7 \\ \text{CF} = 1 \\ \text{HCF} = 1 \end{array}$$

iii)
$$\begin{array}{r} 2 \overline{) 40} \\ 2 \overline{) 20} \\ 2 \overline{) 10} \\ 5 \end{array}$$

$$\begin{array}{r} 2 \overline{) 60} \\ 2 \overline{) 30} \\ 3 \overline{) 15} \\ 5 \end{array}$$

$$\begin{array}{r} 2 \overline{) 80} \\ 2 \overline{) 40} \\ 2 \overline{) 20} \\ 2 \overline{) 10} \\ 5 \end{array}$$

$$\begin{array}{l} \text{F of } 40 = 2 \times 2 \times 2 \times 5 \\ \text{F of } 60 = 2 \times 2 \times 3 \times 5 \\ \text{F of } 80 = 2 \times 2 \times 2 \times 2 \times 5 \\ \text{CF} = 2 \times 2 \times 5 \\ \text{HCF} = 20 \end{array}$$

iv)
$$\begin{array}{r} 2 \overline{) 48} \\ 2 \overline{) 24} \\ 2 \overline{) 12} \\ 2 \overline{) 6} \\ 3 \end{array}$$

$$\begin{array}{r} 2 \overline{) 84} \\ 2 \overline{) 42} \\ 3 \overline{) 21} \\ 7 \end{array}$$

$$\begin{array}{r} 2 \overline{) 88} \\ 2 \overline{) 44} \\ 2 \overline{) 22} \\ 11 \end{array}$$

$$\begin{array}{l} \text{F of } 48 = 2 \times 2 \times 2 \times 2 \times 3 \\ \text{F of } 84 = 2 \times 2 \times 3 \times 7 \\ \text{F of } 88 = 2 \times 2 \times 2 \times 11 \\ \text{CF} = 2 \times 2 \\ \text{HCF} = 4 \end{array}$$

v)
$$\begin{array}{r} 2 \overline{) 12} \\ 2 \overline{) 6} \\ 3 \end{array}$$

$$\begin{array}{r} 2 \overline{) 16} \\ 2 \overline{) 8} \\ 2 \overline{) 4} \\ 2 \end{array}$$

$$\begin{array}{r} 2 \overline{) 28} \\ 2 \overline{) 14} \\ 7 \end{array}$$

$$\begin{array}{l} \text{F of } 12 = 2 \times 2 \times 3 \\ \text{F of } 16 = 2 \times 2 \times 2 \times 2 \\ \text{F of } 28 = 2 \times 2 \times 7 \\ \text{CF} = 2 \times 2 \\ \text{HCF} = 4 \end{array}$$

3.i) $16 \overline{) 24} (1$
 $\underline{16}$
 $8 \overline{) 16} (2$ $HCF = 8$
 $\underline{16}$
 0

ii) $18 \overline{) 30} (1$
 $\underline{18}$
 $12 \overline{) 18} (1$
 $\underline{12}$
 $6 \overline{) 12} (2$
 $\underline{12}$
 0
 $HCF = 6$

iii) $7 \overline{) 14} (2$
 $\underline{14}$
 0
 $7 \overline{) 24} (3$
 $\underline{21}$
 $3 \overline{) 7} (2$ $HCF = 1$
 $\underline{6}$
 $1 \overline{) 3} (3$
 $\underline{3}$
 0

iv) $70 \overline{) 80} (1$ $120 \overline{) 150} (1$
 $\underline{70}$ $\underline{120}$
 $10 \overline{) 70} (7$ $30 \overline{) 120} (4$
 $\underline{70}$ $\underline{120}$
 0 0
 $10 \overline{) 30} (3$ $HCF = 10$
 $\underline{30}$
 0

$$\begin{array}{r}
 V \quad 32 \overline{)56} (1 \\
 \underline{-32} \\
 24 \\
 \underline{24} \overline{)32} (1 \\
 \underline{-24} \\
 8 \overline{)24} (3 \\
 \underline{-24} \\
 0
 \end{array}$$

$$\begin{array}{r}
 8 \overline{)46} (5 \\
 \underline{-40} \\
 6 \\
 \underline{6} \overline{)8} (1 \\
 \underline{-6} \\
 2 \overline{)6} (3 \\
 \underline{-6} \\
 0
 \end{array}$$

HCF = 2

$$\begin{array}{r}
 4i) \quad 45 \overline{)75} (1 \\
 \underline{-45} \\
 30 \\
 \underline{30} \overline{)45} (1 \\
 \underline{-30} \\
 15 \overline{)30} (2 \\
 \underline{-30} \\
 0
 \end{array}$$

$$\begin{array}{r}
 15 \overline{)135} (9 \\
 \underline{-135} \\
 0
 \end{array}$$

HCF = 15

$$\begin{array}{r}
 ii) \quad 36 \overline{)48} (1 \\
 \underline{-36} \\
 12 \overline{)36} (3 \\
 \underline{-36} \\
 0
 \end{array}$$

$$\begin{array}{r}
 12 \overline{)96} (8 \\
 \underline{-96} \\
 0
 \end{array}$$

HCF = 12

$$\begin{array}{r}
 iii) \quad 32 \overline{)66} (2 \\
 \underline{-66} \\
 0
 \end{array}$$

$$\begin{array}{r}
 33 \overline{)132} (4 \\
 \underline{-132} \\
 0
 \end{array}$$

HCF = 33

$$\begin{array}{r}
 iv) \quad 24 \overline{)36} (1 \\
 \underline{-24} \\
 12 \overline{)24} (2 \\
 \underline{-24} \\
 0
 \end{array}$$

$$\begin{array}{r}
 60 \overline{)120} (2 \\
 \underline{-120} \\
 12 \overline{)60} (5 \\
 \underline{-60} \\
 0
 \end{array}$$

$$\begin{array}{r}
 12 \overline{)12} (1 \\
 \underline{-12} \\
 0
 \end{array}$$

HCF = 12

v)

$$\begin{array}{r} 30 \overline{) 60} (2 \\ \underline{-60} \\ 0 \end{array}$$

$$\begin{array}{r} 90 \overline{) 105} (1 \\ \underline{-90} \end{array}$$

$$\begin{array}{r} 15 \overline{) 30} (2 \\ \underline{-30} \\ 0 \end{array}$$

$$\begin{array}{r} 15 \overline{) 90} (6 \\ \underline{-90} \\ 0 \end{array}$$

~~HCF = 6~~

HCF = 15

5

$$\begin{array}{r} 180 \overline{) 225} (1 \\ \underline{-180} \end{array}$$

$$\begin{array}{r} 45 \overline{) 315} (7 \\ \underline{-315} \\ 0 \end{array}$$

$$\begin{array}{r} 45 \overline{) 180} (4 \\ \underline{-180} \\ 0 \end{array}$$

HCF = 45

∴ so the greatest number are = 45

6. F of 45 = 1, 3, 5, 9, 15, 45
 F of 56 = 1, 2, 4, 7, 14, 28, 56
 (F = 1)
 HCF = 1

7 15 and 16, 16 and 21, 21 and 28, 15 and 28

- 8 $93 \div 3 = 90$
 $111 \div 3 = 108$
 $129 \div 3 = 126$

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

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

HCF = 18

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