

Bhaswan sardar
Mathematics Ex-8B

1. (i) $16 = ①, 2, 4, 8$ and 16

$35 = ①, 5, 7$ and 35

H.C.F. = 1

ii) $25 = ①, ⑤, \cancel{25}$ and 25

$20 = ①, 2, 4, ⑤, 10$ and 20

H.C.F. = 5

iii) $27 = ①, ③, 9$ and 27

$75 = ①, ③, 5, 25$ and 75

H.C.F. = 3

iv) $8 = ①, ②, 4$ and 8

$12 = ①, ②, 3, 4, 6$ and 12

$18 = ①, ②, 3, 6, 9$ and 18

H.C.F. = 2

v) $24 = 1, 2, 3, 4, 6, 8, 12$ and 24

$36 = 1, 2, 3, 4, 6, 8, 12, 18$ and 36

$45 = 1, 3, 5, 9, 15$ and 45

$60 = 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30$ and 60

H.C.F. = 3

2. i) $5 = 1 \times 5$

$8 = 2 \times 2 \times 2 \times 1$

H.C.F. = 1

ii) $24 = 2 \times 2 \times 3 \times 1$

$49 = 49 \times 1$

H.C.F. = 1

iii) $40 = 2 \times 2 \times 5 \times 2$

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

$80 = 2 \times 2 \times 5 \times 4$

H.C.F. = $2 \times 2 \times 5$

= 20

$$iv) 48 = (2 \times 2) \times 2 \times 2 \times 3$$

$$84 = (2 \times 2) \times 3 \times 7$$

$$88 = (2 \times 2) \times 2 \times 11$$

$$H.C.F. = 2 \times 2 \\ = 4$$

$$v) 12 = (2 \times 2) \times 3$$

$$16 = (2 \times 2) \times 2 \times 2$$

$$28 = (2 \times 2) \times 7$$

$$H.C.F. = 2 \times 2 \\ = 4$$

$$3. \quad i) \begin{array}{r} 16 \overline{) 24} \quad (1 \\ \underline{-16} \\ 8 \overline{) 24} \quad (3 \\ \underline{-24} \\ 0 \end{array}$$

$$H.C.F. = 16$$

$$\begin{array}{r}
 11) \quad 18 \overline{) 30} \quad (1 \\
 \underline{- 18} \\
 12 \overline{) 18} \quad (1 \\
 \underline{- 12} \\
 6 \overline{) 12} \quad (2 \\
 \underline{- 12} \\
 0
 \end{array}$$

H.C.F. = 6

$$11) \quad 7 \overline{) 14} \quad (2 \\
 \underline{- 14} \\
 0$$

$$\begin{array}{r}
 7 \overline{) 24} \quad (3 \\
 \underline{- 21} \\
 3 \overline{) 21} \quad (7 \\
 \underline{- 21} \\
 0
 \end{array}$$

H.C.F. = 3

$$\begin{array}{r}
 iv \quad 70 \overline{) 80} \quad (1 \\
 \underline{- 70} \\
 10 \overline{) 70} \quad (7 \\
 \underline{- 70} \\
 0
 \end{array}$$

$$\begin{array}{r}
 10 \overline{) 120} \quad (12 \\
 \underline{- 120} \\
 0
 \end{array}$$

$$\begin{array}{r}
 10 \overline{) 150} \quad (15 \\
 \underline{- 150} \\
 0
 \end{array}$$

H.C.F. = 10

Page _____

$$v) 32 \overline{) 56} \quad (1$$

$$- 32$$

$$\underline{24} \overline{) 32} \quad (1$$

$$- 24$$

$$\underline{8} \overline{) 24} \quad (3$$

$$- 24$$

$$\underline{0}$$

$$8 \overline{) 46} \quad (5$$

$$- 40$$

$$6 \overline{) 40} \quad (6$$

$$- 36$$

$$\underline{4} \overline{) 36} \quad (9$$

$$- 36$$

$$\underline{0}$$

$$H.C.F = 4$$

$$4. (i) 45 \overline{) 75} \quad (1$$

$$- 45$$

$$\underline{30} \overline{) 45} \quad (1$$

$$- 30$$

$$\underline{15} \overline{) 30} \quad (2$$

$$- 30$$

$$\underline{0}$$

$$H.C.F = 15$$

$$36$$

$$ii) 48 \overline{) 48} \quad (1$$

$$- 48$$

$$\underline{12} \overline{) 36} \quad (3$$

$$- 36$$

$$\underline{0}$$

$$\begin{array}{r} 12 \overline{) 96} \text{ L8} \\ - 96 \\ \hline 0 \end{array}$$

$$\text{H.C.F.} = 12$$

$$\text{ii) } \begin{array}{r} 33 \overline{) 66} \text{ L2} \\ - 66 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 33 \overline{) 132} \text{ L4} \\ - 132 \\ \hline 0 \end{array}$$

$$\text{H.C.F.} = 33$$

$$\text{iv) } \begin{array}{r} 24 \overline{) 36} \text{ L1} \\ - 24 \\ \hline 12 \overline{) 24} \text{ L2} \\ - 24 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 12 \overline{) 60} \text{ L5} \\ - 60 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 12 \overline{) 132} \text{ L11} \\ - 132 \\ \hline 0 \end{array}$$

$$\text{H.C.F.} = 12$$

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

$$\begin{array}{r} 30 \overline{) 90} \text{ (3)} \\ - 90 \\ \hline 0 \end{array}$$

$$\begin{array}{r} 30 \overline{) 105} \text{ (3)} \\ - 90 \\ \hline 15 \overline{) 90} \text{ (6)} \\ - 90 \\ \hline 0 \end{array}$$

$$\text{H.C.F.} = 15$$

$$5. \quad \begin{array}{r} 180 \overline{) 225} \text{ (1)} \\ - 180 \\ \hline \end{array}$$

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

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

40

The greatest number ≤ 45

$$6. \quad 45 = 1, 3, 5, 9, 15 \text{ and } 45$$

$$56 = 1, 2, 4, 7, 8, 14, 28, 56$$

\therefore 50, 45 and 56 are coprime numbers

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

8. Since, $93 - 3 = 90$, $111 - 3 = 108$ and

$$129 - 3 = 126$$

∴ Required number is H.C.F. of 90, 108

and 126

$$\text{H.C.F.} = 18$$