

Ch - 8

HCF and LCM

Ex - 8(A)

1. Write all the factors of :

i) 15

$$1 \times 15$$
$$3 \times 5$$
$$5 \times 3$$
$$15 \times 1$$

Factors of 15 are 1, 3, 5, 15

ii) 55

$$1 \times 55$$
$$5 \times 11$$
$$11 \times 5$$
$$55 \times 1$$

factors of 55 are 1, 5, 11, 55

iii) 48

$$1 \times 48$$
$$2 \times 24$$
$$3 \times 16$$
$$4 \times 12$$
$$6 \times 8$$
$$8 \times 6$$
$$12 \times 4$$
$$16 \times 3$$
$$24 \times 2$$
$$48 \times 1$$

factors of 48 are 1, 2, 3, 4, 6, 8, 12, 16, 24, 48

iv) 36

$$1 \times 36$$
$$2 \times 18$$
$$3 \times 12$$
$$4 \times 9$$
$$6 \times 6$$
$$9 \times 4$$
$$12 \times 3$$
$$18 \times 2$$
$$36 \times 1$$

factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18, 36.

1×84 21×4
 2×42 28×3
 3×28 42×2
 4×21 84×1
 6×14
 7×12 Factors of 84 are 1, 2, 3,
 12×7 4, 6, 7, 12, 14, 21, 28,
 14×6 42, 84.

2. Write all prime numbers :

i) less than 25

2, 3, 5, 7, 11, 13, 17, 19 and 23

ii) between 15 and 35

17, 19, 23, 29 and 31

iii) between 8 and 76

11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59,
61, 67, 71 and 73.

3. Write the prime numbers from :

i) 5 to 45

5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41 and 43

ii) 2 to 32

2, 3, 5, 7, 11, 13, 17, 19, 23, 29 and 31.

iii) 8 to 48

11, 13, 17, 19, 23, 29, 31, 37, 41, 43 and 47

iv) 9 to 59

11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, and 59.

4 Write the prime factors of :

i) 16

$$\begin{array}{r} 2 \overline{) 16} \\ 2 \overline{) 8} \\ 2 \overline{) 4} \\ 2 \overline{) 2} \\ 1 \end{array}$$

Prime factor of 16 is 2

ii) 27

$$\begin{array}{r} 3 \overline{) 27} \\ 3 \overline{) 9} \\ 3 \overline{) 3} \\ 1 \end{array}$$

Prime factor of 27 is 3

iii) 35

$$\begin{array}{r} 5 \overline{) 35} \\ 7 \overline{) 7} \\ 1 \end{array}$$

Prime factor of 35 is 5 and 7

iv) 49

$$\begin{array}{r} 7 \overline{) 49} \\ 7 \overline{) 7} \\ 1 \end{array}$$

Prime factor of 49 is 7

5. If P_n means prime factors of n , find :

i) P_6

$$\begin{array}{r} 2 \overline{) 6} \\ 3 \overline{) 3} \\ 1 \end{array}$$

Prime factor of 6 is 2 and 3

ii) P_{24}

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

Prime factor of 24 is 2 and 3

iii) P_{50}

$$\begin{array}{r} 2 \overline{) 50} \\ 5 \overline{) 25} \\ 5 \overline{) 5} \\ 1 \end{array}$$

Prime factor of 50 is 2 and 5

iv) P_{42}

$$\begin{array}{r} 2 \overline{) 42} \\ 3 \overline{) 21} \\ 7 \overline{) 7} \\ 1 \end{array}$$

Prime factor of 42 is 2, 3, 7