

Exercise 8(A)

1. Write all the factors of:

i) 15

Ans - The factors of 15 are 1, 3, 5 and 15

$$\therefore F(15) = 1, 3, 5 \text{ and } 15$$

ii) 55

Ans - The factors of 55 are 1, 5, 11 and 55

$$\therefore F(55) = 1, 5, 11 \text{ and } 55$$

iii) 48

Ans - The factors of 48 are 1, 2, 3, 4, 6, 8, 12, 16, 24 and 48

$$\therefore F(48) = 1, 2, 3, 4, 6, 8, 12, 16, 24 \text{ and } 48$$

iv) 36

Ans - The factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18 and 36

$$\therefore F(36) = 1, 2, 3, 4, 6, 9, 12, 18 \text{ and } 36$$

v) 84

Ans - The factors of 84 are 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42 and 84

$$\therefore F(84) = 1, 2, 3, 4, 6, 7, 12, 14, 21, 28, 42 \text{ and } 84$$

2. Write all the prime numbers:

i) less than 25

Ans - 2, 3, 5, 7, 11, 13, 17, 19 and 23 are the prime numbers less than 25.

ii) between 15 and 35

Ans - 17, 19, 23, 29 and 31 are the prime numbers between 15 and 35.

iii) between 8 and 76

Ans - 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71 and 73 are the prime numbers between 8 and 76.

3. Write the prime numbers from:

i) 5 to 45

Ans - The prime numbers from 5 to 45 are 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41 and 43.

ii) 2 to 32

Ans- The prime numbers from 2 to 32 are 2, 3, 5, 7, 11, 13, 17, 19, 23, 29 and 31

iii) 8 to 48

Ans- The prime numbers from 8 to 48 are 11, 13, 17, 19, 23, 29, 31, 37, 41, 43 and 47

iv) ~~The~~ 9 to 59

Ans- The prime numbers from 9 to 59 are 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53 and 59

4. Write the prime factors of:

i) 16

Ans- Factors of 16 = 1, 2, 4, 8 and 16

Prime factor = 2

\therefore Prime factors of 16 is 2

ii) 27

Ans- Factors of 27 = 1, 3, 9 and 27

Prime factor = 3

\therefore Prime factors of 27 is 3

iii) 35

Ans- Factors of 35 = 1, 5, 7 and 35

Prime factors = 5 and 7

\therefore Prime factors of 35 is 5 and 7.

iv) 49

Ans- Factors of 49 = 1, 7 and 49

Prime factor = 7

\therefore Prime factor of 49 is 7

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

i) P_6

Ans - Factors of 6 = 1, 2, 3 and 6

Prime factors = 2 and 3

∴ Prime factors of 6 are 2 and 3

ii) P_{24}

Ans - Factors of 24 = 1, 2, 3, 4, 6, 8, 12 and 24

Prime factors = 2 and 3

∴ Prime factors of 24 are 2 and 3

iii) P_{50}

Ans - Factors of 50 = 1, 2, 5, 10, 25 and 50

Prime factors = 2 and 5

∴ Prime factors of 50 are 2 and 5

iv) P_{42}

Ans - Factors of 42 are - 1, 2, 3, 6, 7, 14, 21 and 42

Prime factors = 2, 3 and 7

∴ Prime factors of 42 are 2, 3 and 7