Exercise 2A

Q1

Answer :

Factor: A factor of a number is an exact divisor of that number.
Multiple: A multiple of a number is a number obtained by multiplying it by a natural number.

Example 1: We know that 15 = 1 × 15 and 15 = 3 × 5

∴ 1, 3, 5 and 15 are the factors of 15.
In other words, we can say that 15 is a multiple of 1, 3, 5 and 15.

Example 2: We know that 8 = 8 × 1, 8 = 2 × 4 and 8 = 4 × 2

∴ 1, 2, 4 and 8 are the factors of 8.
In other words, we can say that 8 is a multiple of 1, 2, 4 and 8.

Example 3: We know that 30 = 30 × 1, 30 = 5 × 6 and 30 = 6 × 5

Q2

Answer :

(i) 20
20 = 1 × 20; 20 = 10 × 2 and 20 = 4 × 5
The factors of 20 are 1, 2, 4, 5, 10 and 20.

(ii) 36
36 = 1 × 36; 36 = 2 × 18; 36 = 3 × 12 and 36 = 4 × 9
The factors of 36 are 1, 2, 3, 4, 6, 9, 12 and 36.

(iii) 60
60 = 1 × 60; 60 = 2 × 30; 60 = 3 × 20; 60 = 4 × 15 and 60 = 5 × 12
The factors of 60 are 1, 2, 3, 4, 5, 6, 10, 12, 15 and 60.

(iv) 75
75 = 1 × 75; 75 = 3 × 25 and 75 = 5 × 15
The factors of 75 are 1, 3, 5, 15, 25 and 75.

Q3

Answer :

(i) 17
17 × 1 = 17; 17 × 2 = 34; 17 × 3 = 51; 17 × 4 = 68 and 17 × 5 = 85
∴ The first five multiples of 17 are 17, 34, 51, 68 and 85.

(ii) 23
23 × 1=23; 23 × 2 = 46; 23 × 3 = 69; 23 × 4 = 92 and 23 × 5 = 115
∴ The first five multiples of 23 are 23, 46, 69, 92 and 115.

(iii) 65

65 × 1 = 65; 65 × 2 = 130; 65 × 3 = 195; 65 × 4 = 260 and 65 × 5 = 325

∴ The first five multiples of 65 are 65, 130, 195, 260 and 325.

(iv) 70

70 × 1=70; 70 × 2 = 140; 70 × 3 = 210; 70 × 4 = 280 and 70 × 5 = 350

∴ The first five multiples of 70 are 70, 140, 210, 280 and 350.

Q4

Answer :

(i) 32

Since 32 is a multiple of 2, it is an even number.

(ii) 37

Since 37 is not a multiple of 2, it is an odd number.

(iii) 50

Since 50 is a multiple of 2, it is an even number.

(iv) 58

Since 58 is a multiple of 2, it is an even number.

(v) 69

Since 69 is not a multiple of 2, it is an odd number.

(vi) 144

Since 144 is a multiple of 2, it is an even number.

(vii) 321

Since 321 is not a multiple of 2, it is an odd number.

(viii) 253

Since 253 is not a multiple of 2, it is an odd number.

Q5

Answer :

Prime number: A number is called a prime number if it has only two factors, namely 1 and itself .

Examples: 2, 3, 5, 7, 11, 13, 17, 19, 23 and 29 are prime numbers.

Q6

Answer :

(i) All prime numbers between 10 and 40 are 11, 13, 17, 19, 23, 29, 31 and 37.

(ii) All prime numbers between 80 and 100 are 83, 89 and 97.

(iii) All prime numbers between 40 and 80 are 41, 43, 47, 53, 59, 61, 67, 71, 73 and 79.

(iv) All prime numbers between 30 and 40 are 31 and 37.

Q7

Answer :

(i) The smallest prime number is 2.

(ii) There is only one even prime number, i.e., 2.

(iii) The smallest odd prime number is 3.

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