Access NCERT Solutions for Class 6 Chapter 3: Playing with Numbers Exercise 3.1

1. Write all the factors of the following numbers:

(a) 24

(b) 15

(c) 21

(d) 27

(e) 12

(f) 20

(g) 18

(h) 23

(i) 36

Solutions:

(a) 24

24 = 1 × 24 24 = 2 × 12 24 = 3 × 8

24 = 4 × 6 24 = 6 × 4

Stop here since 4 and 6 have occurred earlier

Hence, the factors of 24 are 1, 2, 3, 4, 6, 8, 12 and 24

(b) 15

15 = 1 × 15 15 = 3 × 5 15 = 5 × 3

Stop here since 3 and 5 have occurred earlier

Hence, the factors of 15 are 1, 3, 5 and 15

(c) 21

21 = 1 × 21 21 = 3 × 7 21 = 7 × 3

Stop here since 3 and 7 have occurred earlier

Hence, the factors of 21 are 1, 3, 7 and 21

(d) 27

27 = 1 × 27 27 = 3 × 9 27 = 9 × 3

Stop here since 3 and 9 have occurred earlier

Hence, the factors of 27 are 1, 3, 9 and 27

(e) 12

12 = 1 × 12 12 = 2 × 6 12 = 3 × 4 12 = 4 × 3

Stop here since 3 and 4 have occurred earlier

Hence, the factors of 12 are 1, 2, 3, 4, 6 and 12

(f) 20

20 = 1 × 20 20 = 2 × 10 20 = 4 × 5 20 = 5 × 4

Stop here since 4 and 5 have occurred earlier

Hence, the factors of 20 are 1, 2, 4, 5 10 and 20

(g) 18

18 = 1 × 18 18 = 2 × 9 18 = 3 × 6 18 = 6 × 3

Stop here since 3 and 6 have occurred earlier

Hence, the factors of 18 are 1, 2, 3, 6, 9 and 18

(h) 23

23 = 1 × 23 23 = 23 × 1

Since 1 and 23 have occurred earlier

Hence, the factors of 23 are 1 and 23

(i) 36

36 = 1 × 36 36 = 2 × 18 36 = 3 × 12 36 = 4 × 9

36 = 6 × 6

Stop here, since both the factors (6) are same. Thus the factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18 and 36

2. Write first five multiples of:

(a) 5

(b) 8

(c) 9

Solutions:

(a) The required multiples are:

5 × 1 = 5

5 × 2 = 10

5 × 3 = 15

5 × 4 = 20

5 × 5 = 25

Hence, the first five multiples of 5 are 5, 10, 15, 20 and 25

(b) The required multiples are:

8 × 1 = 8

8 × 2 = 16

8 × 3 = 24

8 × 4 = 32

8 × 5 = 40

Hence, the first five multiples of 8 are 8, 16, 24, 32 and 40

(c) The required multiples are:

$9 \times 1 = 9$

$9 \times 2 = 18$

$9 \times 3 = 27$

$9 \times 4 = 36$

$9 \times 5 = 45$

Hence, the first five multiples of 9 are 9, 18, 27, 36 and 45

3. Match the items in column 1 with the items in column 2.

Column 1 Column 2

(i) 35 (a) Multiple of 8

(ii) 15 (b) Multiple of 7

(iii) 16 (c) Multiple of 70

(iv) 20 (d) Factor of 30

(v) 25 (e) Factor of 50

(f) Factor of 20

Solutions:

(i) 35 is a multiple of 7

Hence, option (b)

(ii) 15 is a factor of 30

Hence, option (d)

(iii) 16 is a multiple of 8

Hence, option (a)

(iv) 20 is a factor of 20

Hence, option (f)

(v) 25 is a factor of 50

Hence, option (e)

4. Find all the multiples of 9 upto 100.

Solutions:

$9 \times 1 = 9$ $9 \times 2 = 18$ $9 \times 3 = 27$ $9 \times 4 = 36$ $9 \times 5 = 45$ $9 \times 6 = 54$

$9 \times 7 = 63$ $9 \times 8 = 72$ $9 \times 9 = 81$ $9 \times 10 = 90$ $9 \times 11 = 99$

$\therefore$ All the multiples of 9 upto 100 are 9, 18, 27, 36, 45, 54, 63, 72, 81, 90 and 99