

Exercise – 3.1

Q1. 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

Sol. (a) Factors of 24 are:

$$24 = 1 \times 24;$$

$$24 = 2 \times 12;$$

$$24 = 3 \times 8;$$

$$24 = 4 \times 6$$

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

(b) Factors of 15 are:

$$15 = 1 \times 15;$$

$$15 = 3 \times 5$$

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

(c) Factors of 21 are:

$$21 = 1 \times 21;$$

$$21 = 3 \times 7$$

Hence, all the factors of 21 are: 1, 3, 7, and 21.

(d) Factors of 27 are:

$$27 = 1 \times 27;$$

$$27 = 3 \times 9.$$

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

(e) Factors of 12 are:

$$12 = 1 \times 12;$$

$$12 = 2 \times 6;$$

$$12 = 3 \times 4$$

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

(f) Factors of 20 are:

$$20 = 1 \times 20;$$

$$20 = 2 \times 10;$$

$$20 = 4 \times 5$$

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

(g) Factors of 18 are:

$$18 = 1 \times 18;$$

$$18 = 2 \times 9;$$

$$18 = 3 \times 6$$

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

(h) Factors of 23 are:

$$23 = 1 \times 23$$

Hence, all the factors of prime number 23 are 1 and 23.

(i) Factors of 36 are:

$$36 = 1 \times 36;$$

$$36 = 2 \times 18;$$

$$36 = 3 \times 12;$$

$$36 = 4 \times 9;$$

$$36 = 6 \times 6$$

Hence, all the factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18, and 36.

Q2. Write first five multiples of:

(a) 5 (b) 8 (c) 9

Sol. (a) First five multiples of 5 are:

$$5 \times 1 = 5;$$

$$5 \times 2 = 10;$$

$$5 \times 3 = 15;$$

$$5 \times 4 = 20;$$

$$5 \times 5 = 25$$

Hence, the required multiples of 5 are 5, 10, 15, 20, and 25.

(b) First five multiples of 8 are:

$$8 \times 1 = 8;$$

$$8 \times 2 = 16;$$

$$8 \times 3 = 24;$$

$$8 \times 4 = 32;$$

$$8 \times 5 = 40$$

Hence, the required multiples of 8 are 8, 16, 24, 32, and 40.

(c) First five multiples of 9 are:

$$9 \times 1 = 9;$$

$$9 \times 2 = 18;$$

$$9 \times 3 = 27;$$

$$9 \times 4 = 36;$$

$$9 \times 5 = 45$$

Hence, the required multiples of 9 are 9, 18, 27, 36, and 45.

Q3. Match the items in column I with the items in column II.

Column I	Column II
35	(a) Multiple of 8
15	(b) Multiple of 7
16	(c) Multiple of 70
20	(d) Factor of 30
25	(e) Factor of 50
	(f) Factor of 20

Sol. (i) \leftrightarrow (b) [$\because 7 \times 5 = 35$]

(ii) \leftrightarrow (d) [$\because 15 \times 2 = 30$]

(iii) \leftrightarrow (a) [$\because 8 \times 2 = 16$]

(iv) \leftrightarrow (f) [$\because 20 \times 1 = 20$]

(v) \leftrightarrow (e) [$\because 25 \times 2 = 50$]

Q4. Find all the multiples of 9 upto 100.

Sol. $9 \times 1 = 9;$

$$9 \times 2 = 18;$$

$$9 \times 3 = 27;$$

$$9 \times 4 = 36;$$

$$9 \times 5 = 45;$$

$$9 \times 6 = 54;$$

$$9 \times 7 = 63;$$

$$9 \times 8 = 72;$$

$$9 \times 9 = 81;$$

$$9 \times 10 = 90;$$

$$9 \times 11 = 99$$

Hence, all the multiples of 9 up to 100 are:

9, 18, 27, 36, 45, 54, 63, 72, 81, 90, and 99.

