

1 write each of the following sets in the Roster Form

(i) The set of five numbers each of which is divisible by 3.

Ans $\{3, 6, 9, 12, 15\}$

(ii) The set of integers between -4 and 4

Ans $\{-3, -2, -1, 0, 1, 2, 3\}$

(iii) $\{x: x \text{ is a letter in the word SCHOOL}\}$

Ans $\{S, C, H, O, L\}$

(iv) $\{x: x \text{ is an odd natural number between 10 and 20}\}$

Ans $\{11, 13, 15, 17, 19\}$

(v) $\{ \text{vowels used in the word 'AMERICA'} \}$

Ans $\{A, E, I\}$

(vi) $\{ \text{consonants used in the word 'MADRAS'} \}$

Ans $\{M, D, R, S\}$

2. Write each given set in the Roster Form:

(i) All prime numbers between one twenty

Ans $\{2, 3, 5, 7, 11, 13, 17, 19\}$

(ii) The squares of first four natural number

Ans $\{1, 2, 3, 4\}$. $1^2 = 1 \times 1 = 1$, $2^2 = 2 \times 2 = 4$, $3^2 = 3 \times 3 = 9$, $4^2 = 4 \times 4 = 16$
∴ $\{1, 4, 9, 16\}$

(iii) Even numbers between 1 and 9

Ans 2, 4, 6, 8

(iv) First eight letters of the ~~English~~ English ^{alphabet} alphabet

$\{a, b, c, d, e, f, g, h\}$

(v) The letter of the word 'Basket'

{ a, k, e, s, t }

3 Write each given set in the set Builder Form:

(i) $\{2, 4, 6, 8, 10\}$

Ans $\{x : x \text{ is an even natural number less than } 12\}$ is the set: Builder form for $\{2, 4, 6, 8, 10\}$

(ii) $\{2, 3, 5, 7, 11\}$

Ans $\{x : x \text{ is a prime number less than } 12\}$ is the set -
Builder form for $\{2, 3, 5, 7, 11\}$

(iii) $\{\text{January, June, July}\}$

Ans $\{x : x \text{ is a month of the year whose name starts with letter J}\}$ is the set - Builder form $\{\text{January, July, June}\}$

(iv) $\{a, e, i, o, u\}$

Ans $\{x : x \text{ is a vowel in English alphabets}\}$ is the set - Builder form for $\{a, e, i, o, u\}$

(v) $\{\text{Tuesday, Thursday}\}$

Ans $\{x : x \text{ is a day of the week whose name}$

4 Write each of the following sets in Roster (Tabular) form and also in Set-Builder Form.

(i) Set of all natural numbers that can divide 24 completely.

Ans → The Roster Form is $\{1, 2, 3, 4, 6, 8, 12, 24\}$

The Set-Builder Form is $\{x: x \text{ is a natural number which divides 24 completely}\}$

(ii) Set of odd numbers between 20 and 35

Ans → The Roster Form is $\{21, 23, 25, 27, 29, 31, 33\}$

The Set-Builder Form is $\{x: x \text{ is an odd number between 20 and 35}\}$

(iii) Set of letters used in the word 'CALCOTTA'.

Ans → The Roster Form is $\{C, A, L, O, T, T, A\}$
 $\{January, February, March, April, May\}$

Ans The Roster Form is $\{c, a, l, u, t\}$

The set - Builder Form is $\{x: x \text{ is a letter used in the word 'CALCUTTA'}\}$

(iv) Set of ~~name~~ names of the first five months of a year.

Ans The Roster Form is $\{\text{January, February, March, April, May}\}$

The Set Builder Form is $\{x: x \text{ is a name of the first five months of a year}\}$

(v) Set of all two-digit numbers that are perfect squares as well.

Ans The Roster Form is $\{16, 25, 36, 49, 64, 81\}$

The Set - Builder Form is $\{x: x \text{ is a perfect square of two digit numbers}\}$