H.W
09.07.21

Exercise 10(C).

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- The required set = {3, 6, 9, 12, 15}

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

Ans- The required set = {-3, -2, -1, 0, 1, 2, 3}

iii) {x : x is a letter in the word 'SCHOOL'}

Ans- The required set = {S, C, H, O, L}

iv) {x : x is an odd natural number between 10 and 20}

Ans- The required set = {11, 13, 15, 17, 19}

v) {vowels used in the word 'AMERICA'}

Ans- The required set = {a, e, i}

vi) {consonants used in the word 'MADRAS'}

Ans- The required set = {m, d, r, s}

2. Write each given set in the Roster Form:

i) All prime numbers between 1 and 20.

Ans- The required set = {2, 3, 5, 7, 11, 13, 17, 19}

ii) The Squares of first four natural numbers.

Ans- The required set = $\{1^2, 2^2, 3^2, 4^2\}$ = {1, 4, 9, 16}

iii) Even numbers between 1 and 9.

Ans- The required set = {2, 4, 6, 8}

iv) First eight letters of the English alphabet.

Ans- The required set = {a, b, c, d, e, f, g, h}

v) The letters of the word 'BASKET'.

Ans- The required set = {b, a, s, k, e, t}

vi) Four cities of India whose names start with the letter J.

Ans- The required set = {Jaipur, Jodhpur, Jalandhar, Jaunpur}

vii) Any four closed geometrical figures.

Ans- The required set = {△, ○, □, ⬭}

viii) Vowels used in the word 'MONDAY'.

Ans- The required set = {o, a}

ix) Single digit numbers that are perfect squares as well.

Ans- The required set = {0, 1, 4, 9}

3. Write each given set in the Set-Builder Form:

i) {2, 4, 6, 8, 10}

Ans- The required set = {x : x is an even natural number less than 12}

ii) {2, 3, 5, 7, 11}

Ans- The required set = {x : x is a prime number less than 12}

iii) {January, June, July}

Ans- The required set = {x : x is months of the year whose name starts with letter J,

iv) {a, e, i, o, u}

Ans- The required set = {x : x is a vowel in English alphabets}

v) {Tuesday, Thursday}

Ans- The required set = {x : x is a day of the week whose name starts with letter T}

vi) {1, 4, 9, 16, 25}

Ans- The required set = {x : x is a perfect square natural number upto 25}

vii) {5, 10, 15, 20, 25, 30}

Ans- The required set = {x : x is a natural number upto 30 and divisible by 5}

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 required set in roster form = {1, 2, 3, 4, 6, 8, 12, 24}

The required set in Set-Builder form = {x : x is a natural number which divides 24 completely}

ii) Set of odd numbers between 20 and 35

Ans- The required set in roster form = {21, 23, 25, 27, 29, 31, 33}

The required set in Set-Builder form = {x : x is an odd number between 20 and 35}

iii) Set of letters used in the word 'CALCUTTA'.

Ans- The required set in roster form = {C, a, l, u, t}

The required set in Set-Builder form = {x : x is a letter used in the word 'CALCUTTA'}

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

Ans- The required set is roster form = {January, February, March, April, May}

The required set in Set-Builder form = {x : x is name of first five months of a year}

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

Ans- The required set in roster form = {16, 25, 36, 49, 64, 81}

The required set in Set-Builder form = {x : x is a perfect square two digit number}

5. Write in Roster form, the set of :

i) the first four odd natural numbers each divisible by 5.

Ans- The required set = {5, 15, 25, 35}

ii) the counting numbers between 15 and 35; each of which is divisible by 6.

Ans- The required set = {18, 24, 30}

iii) the names of the last three days of a week.

Ans- The required set = {Friday, Saturday, Sunday}

iv) the names of the last four months of a year.

Ans- The required set = {September, October, November, December}