

16.7.21

EX - 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 — $\{3, 6, 9, 12, 15\}$

ii) The set of integers between -4 and 4 — $\{-3, -2, -1, 0, 1, 2, 3\}$

iii) $\{x: x \text{ is a letter in the word 'SCHOOL'}\}$ — $\{s, c, h, o, l\}$

iv) $\{x: x \text{ is an odd natural number between 10 and 20}\}$ — $\{11, 13, 15, 17, 19\}$

v) $\{\text{Vowels used in the word 'AMERICA'}\}$ — $\{a, e, i\}$

vi) $\{\text{Consonants used in the word 'MADRAS'}\}$ — $\{m, d, r, s\}$

2. Write each given set in the Roster Form —

i) All prime numbers between 1 and 20 — $\{2, 3, 5, 7, 11, 13, 17, 19\}$

ii) The Squares of the first four natural numbers — $\{1^2, 2^2, 3^2, 4^2\} = \{1, 4, 9, 16\}$

iii) Even numbers between 1 and 9 — $\{2, 4, 6, 8\}$

iv) The first eight letters of English alphabet — $\{a, b, c, d, e, f, g, h\}$

v) The letters of the word 'BASKET' — $\{b, a, s, k, e, t\}$

vi) Four cities of India whose names start with the letter J — $\{Jaipur, Jodhpur, Jalandhar, Jhansi\}$

vii) Any four closed geometrical figures — $\{\Delta, O, \square, \square\}$

viii) Vowels used in the word 'MONDAY' — $\{o, a\}$

ix) Single digit numbers that are perfect squares as well — $\{0, 1, 4, 9\}$

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

i) $\{2, 4, 6, 8, 10\}$ — $\{x: x \text{ even natural numbers less than } 12\}$

ii) $\{2, 3, 5, 7, 11\}$ — $\{x: x \text{ Prime numbers less than } 12\}$

iii) $\{January, June, July\}$ — $\{x: x \text{ months of the year whose name starts with letter J}\}$

iv) $\{a, e, i, o, u\}$ — $\{x: x \text{ vowels in English alphabet}\}$

v) $\{Tuesday, Thursday\}$ — $\{x: x \text{ days of the week whose name starts with letter T}\}$

vi) $\{1, 4, 9, 16, 25\}$ — $\{x: x \text{ natural number upto } 25\}$

vii) $\{5, 10, 15, 20, 25, 30\}$ — $\{x: x \text{ natural number upto } 30 \text{ and divisible by } 5\}$

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.
Roster form — $\{1, 2, 3, 4, 6, 8, 12, 24\}$
Set builder form — $\{x: x \text{ is a natural no. which divides } 24 \text{ completely}\}$

ii) Set of odd numbers between 20 and 35.
Roster form — $\{21, 23, 25, 27, 29, 31, 33\}$
Set builder form — $\{x: x \text{ is an odd no. between } 20 \text{ and } 35\}$

iii) Set of letters used in the word 'CALCUTTA'.
Roster form — $\{c, a, l, u, t\}$
Set builder form — $\{x: x \text{ letters used in the word CALCUTTA}\}$

iv) Set of names of the first five months of a year.
Roster — $\{\text{Jan.}, \text{Feb.}, \text{Mar.}, \text{Apr.}, \text{May}\}$
Set builder — $\{x: x \text{ first five months of a year}\}$

v) Set of all two-digit numbers that are Perfect Square as well.
Roster — $\{16, 25, 36, 49, 64, 81\}$
Set builder — $\{x: x \text{ perfect square two digit number}\}$

5. Write in Roster form 5 —

i) the first four odd natural no. each divisible by 5 —
 $\{5, 15, 25, 35\}$

ii) the counting nos. between 15 and 35, each of which is divisible by 6. — $\{18, 24, 30\}$

iii) the names of the last three days of a week —
 $\{\text{Friday}, \text{Saturday}, \text{Sunday}\}$

iv) the names of the last four months of a year —
 $\{\text{Sept.}, \text{Oct.}, \text{Nov.}, \text{Dec.}\}$