9.4.22

Ex-1.0(c).

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

(i) {2, 4, 6, 8, 10} (ii) {2, 3, 5, 7, 11}
(iii) {January, June, July} (iv) {a, e, i, o, u}
(v) {Tuesday, Thursday} (vi) {1, 4, 9, 16, 25}
vii- {5, 10, 15, 20, 25, 30}

Solution:

i- {x : x is less than even natural number less than 12} is a set Builder method from for {2, 4, 6, 8, 10}.

ii- {x : x is a prime less than 12} is a set Builder method from for {2, 3, 5, 7, 11}.

iii- {x : x is a month of a year whose letter start with the letter J} is a set Builder method from for {January, February, June, July}.

iv- {x : x is the vowels in the English alphabate}

v- {x : x is the day of a week whose letter start with the letter T} is a set Builder method from for {Tuesday, Thursday}.

vi- {x : x is a squares of first five natural number} is a set Builder method for from {1, 4, 9, 16, 25}.

4. Write each of the following sets in Roster (tabular) form and also in set-Builder from:

(i) Set of all natural numbers that can divide 24 completely.
(ii) Set of odd numbers between 20 and 35.
(iii) Set of letter used in the word 'CALCUTTA'.
(iv) Set of names of the first five months of a year.
(v) Set of all two-digit numbers that are perfect squares as well.

Solution:

i- The Roster form is {1,2,3,4,6,8,12,24}.
The set builder method is {X:X is a natural numbers that can divisible 24 completely}.

ii- The Roster form is {21,23,25,27,29,31,33}
The set builder method is {X:X is a odd numbers between 20 and 35.

iii- The Roster form is {C,A,L,U,T}
The set builder method is {X:X is a letter used in the word 'CALCUTTA'}.

iv- The Roster form is {January, February, March, April, May}.
The set builder method is {X:X is a name of the first five months of a year}.

v- The Roaster form is {16,25,36,49,64,72...}

The set builder method is {X:X is a two-digit numbers that are perfect squares as well}

5. Write, in Roster form, the set of:

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

(ii) the counting numbers: each divisible 25 and 35; each of ~~of~~ which is divisible by 6.

(iii) the names of the last three day of a week.

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

solution:

i- {5,15,25,35} is a Roaster form for ~~names of the~~ the first four odd natural numbers each divisible by 5.

ii- {18,24,30} is a Roaster form for the counting numbers between 15 and 35, each of which is divisible by 6.

iii- {Friday, Saturday, Sunday} is a Roaster form for names of the last three days of a week.

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iv- {september, october, November, December} is a koaster form for the last four month of a year.