

Class 11th (maths) H.W for 21/05/2020

Set and their Representations:

- (i) Roster or tabular form
- (ii) Set-builder form

(i) Roster form:

$$A = \{1, 2, 3, 4, 5\}$$

$$B = \{2, 4, 6, 8, 10, \dots\}$$

$$C = \{1, 3, 5, 7, \dots\}$$

$$D = \{a, e, i, o, u\}$$

(ii) Set builder form

$$A = \{x : x \text{ is a natural number}\}$$

$$B = \{x : x \text{ is an even number}\}$$

$$C = \{x : x \text{ is an odd number}\}$$

$$D = \{x : x \text{ is a vowel in English alphabet}\}$$

Ex write the solution set of the equation

$$x^2 + x - 2 = 0 \text{ in roster form}$$

Sol

$$x^2 + x - 2 = 0$$

$$x^2 + 2x - x - 2 = 0$$

$$x(x+2) - 1(x+2) = 0$$

$$(x+2)(x-1) = 0$$

$$x = -2, x = 1$$

$$A = \{-2, 1\}$$

Types of Set:

(1) Finite Set: $A = \{1, 2, 3, 4\}$

$$B = \{1, 2, 3, \dots, 10\}$$

$$C = \{1, 2, 3, \dots, 100\}$$

$$D = \{1, 2, 3, \dots, 1000\}$$

(2) Infinite Set:

$$A = \{1, 2, 3, \dots, \infty\}$$

$$B = \{\dots, -3, -2, -1, 0, 1, 2, 3, \dots, \infty\}$$

$$C = \{a, b, c, d, \dots\} \text{ finite.}$$

Note solve any question related to this.

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class 11th (maths) H.W for 22 and 23 / 05 / 2020

- ① Write the set $\{x: x \text{ is a positive integer and } x^2 < 40\}$ in the roster form.
- ② Write the set $A = \{1, 4, 9, 16, 25, \dots\}$ in set builder form.
- ③ Write the set $A = \{1, 2, 3, 4, 5, 6, 7\}$ in the set builder form.
- ④ Write the definition of set and given example.
- ⑤ If the roots of the equation $(b-c)x^2 + (c-a)x + (a-b) = 0$ are equal, then prove that $2b = a+c$.
- ⑥ Find the value of k for which the equation $x^2 + 5kx + 16 = 0$ has no real roots.
- ⑦ Write the set $B = \{2, 4, 8, 16, 32\}$ in set builder form.
- ⑧ What is the definition of finite set, infinite set, singleton set, Null set with example.
- ⑨ Let A be the set of all even whole number less than 10.
 - (a) Write A in roster form
 - (b) Fill in the blanks with the appropriate symbol \in or \notin
 - (i) $0 \dots A$, (ii) $10 \dots A$ (iii) $3 \dots A$ (iv) $6 \dots A$
- ⑩ Let $A = \{x: x \in \mathbb{N}, x^2 - 9 = 0\}$ and $B = \{x: x \in \mathbb{Z}, x^2 - 9 = 0\}$
Show that $A \neq B$
- ⑪ Show that $\{0\}$ and ϕ are not equivalent sets.

Note :- Students, solve 10 such as question.

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