

Ex - 6(A)

i) $A_1 = \{x \mid 2x + 3 = 11\}$

$$2x + 3 = 11 - 3$$

$$2x = 8$$

$$x = 8/2 \Rightarrow x = 4$$

iii) $A_2 = \{x \mid x \in \mathbb{Z}, -3 \leq x < 4\}$

$$-3 \leq x < 4$$

$$x = -3, -2, -1, 0, 1, 2, 3$$

Given set in roster form is

$$A_2 = \{-3, -2, -1, 0, 1, 2, 3\}$$

iv) $A_{73} = \{x : x \text{ is a two digit number and sum of the digit of } x \text{ is } 7\}$

$$\{x : x \in \mathbb{Z} \text{ and } x^2 \leq 4\}$$

when $x^2 = 4$

$$x = \pm \sqrt{4} = \pm 2$$

when $x^2 = 1$, $x = \pm \sqrt{1} = \pm 1$

when $x^2 = 0$, $x = 0 = \sqrt{0} = 0$

Elements of the given set $\{x : x \in \mathbb{Z} \text{ and } x^2 \leq 4\}$ are $\pm 2, -2, +1, -1, 0$ or $-2, -1, 0, 1, 2$.