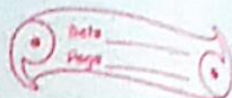


SETS6(A)

$$\text{1. i. } A_1 = \{x: 2x+3=11\}$$

$$\Rightarrow 2x+3=11$$

$$\Rightarrow 2x=11-3$$

$$\Rightarrow 2x=8$$

$$\Rightarrow x = \frac{8}{2} = 4$$

$$\text{So, } A_1 = \{4\} \quad \underline{\underline{\text{Ans}}}$$

$$\text{ii. } A_2 = \{x: x^2 - 6x - 5 = 0\}$$

$$\Rightarrow x^2 - 6x - 5 = 0$$

$$\Rightarrow x^2 - 5x + x - 5 = 0$$

$$\Rightarrow x(x-5) + 1(x-5) = 0$$

$$\Rightarrow (x-5)(x+1) = 0$$

$$\Rightarrow \text{either } x-5=0 \quad \text{or} \quad x+1=0$$

$$A_2 = \{5, -1\} \quad \underline{\underline{\text{Ans}}}$$

$$\text{iii. } A_3 = \{x: x \in \mathbb{Z}, -3 \leq x \leq 4\}$$

$$\bullet \quad -3 \leq x \leq 4$$

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

$$\text{So, } A_3 = \{-3, -2, -1, 0, 1, 2, 3\} \quad \underline{\underline{\text{Ans}}}$$

iv. $A_4 = \{n: n \text{ is a two digit number and sum of digit of } n \text{ is } 7\}$

$\therefore n = 16, 25, 34, 43, 52, 61, 70$

$A_4 = \{16, 25, 34, 43, 52, 61, 70\}$

v. $A_5 = \{n: n = kn, n \in \mathbb{W} \text{ and } n \leq 4\}$

$n = kn$

When $n = 0$, $n = 4 \times 0$

$n = 0$

\Rightarrow When $n = 1$, $n = 4 \times 1$

$n = 4$

\Rightarrow When $n = 2$, $n = 4 \times 2$

$n = 8$

\Rightarrow When $n = 3$, $n = 4 \times 3$

$n = 12$

$A_5 = \{0, 4, 8, 12\}$