

۱- مجموعه های زیر را به زبان ریاضی بنویسید.

۱. $A = \{2, 5, 8, 11, 14, \dots\}$

۲. $B = \{5, 13, 19, 26, 33, \dots, 41\}$

۳. $C = \{1^2, 9, 14, 25, \dots, 144\}$

۴. $D = \{1, 8, 27, 64, \dots\}$

۵. $E = \{1, \frac{1}{4}, \frac{1}{9}, \frac{1}{16}, \dots, \frac{1}{100}\}$

۶. $F = \{\frac{1}{4}, \frac{1}{9}, \frac{1}{16}, \dots\}$

۷. $G = \{\frac{1}{4}, \frac{1}{9}, \frac{1}{16}, \dots\}$

۸. $H = \{-2, 4, -6, 8, -10, \dots\}$

۹. $I = \{0, 3, 8, 15, 24, \dots\}$

۱۰. $J = \{2, 11, 101, 1001, \dots\}$

۱۱. $K = \{9, 99, 999, 9999, \dots\}$

۱۲. $L = \{+1, -2, +3, -4, 5, \dots, 10\}$

۲- مجموعه های زیر را به کمک اعضا بنویسید.

۱. $A = \{3x-1 \mid x \in \mathbb{N}, x \leq 4\}$

۲. $B = \{2^x \mid x \in \mathbb{N}, x > 3\}$

۳. $C = \{\frac{2x-1}{3} \mid x \in \mathbb{Z}, -2 < x < 3\}$

۴. $D = \{\frac{x+2}{x-1} \mid x \in \mathbb{N}, x > 2\}$

$$\Delta, E = \{r^n - 1 \mid n \in \mathbb{W}\}$$

$$4, F = \{k+1 \mid k^r \leq 100, k \in \mathbb{W}\}$$

$$V, G = \{k \mid k \in \mathbb{Z}, \Delta \leq x^r \leq 4r\}$$

$$\Lambda, H = \left\{ (-1)^{\frac{x(x+1)}{r}} (rx-1) \mid x \in \mathbb{N}, x < \Delta \right\}$$

$$9, I = \{r^x \mid x \in \mathbb{W}, \sqrt{x} \in \mathbb{N}, r^x \leq 100\}$$

$$10, J = \{x^y \mid x, y \in \mathbb{N}, x+y = \Delta\}$$

$$11, K = \{x \mid \frac{x}{r} \in \mathbb{Z}, x^r < 100\}$$

$$12, L = \left\{ v \times \frac{10^m - 1}{9} \mid m \in \mathbb{W} \right\}$$

$$13, M = \{rx-1 \mid x \in \mathbb{Z}, rx^r - r = 49\}$$

$$14, N = \{r^{r^n} \mid n \in \mathbb{N}, n^r < 14\}$$

$$15, O = \{x^y \mid x, y \in \mathbb{Z}, x+y = r\}$$

$$16, P = \left\{ x \mid x = \frac{14-k}{r}, k \in \mathbb{W}, x \in \mathbb{N} \right\}$$

$$17, Q = \{rx \mid x \in P, rx \leq 11\}$$

(P مجموعه اعداد اول)

$$18, R = \{r^n - 1 \mid v-n \in \mathbb{O}, n \in \mathbb{W}\}$$

(O مجموعه اعداد فرد طبیعی)

$$19, S = \{r^x \times r^y \mid x+y = v, x, y \in \mathbb{N}\}$$

$$20, T = \left\{ k \mid k = (-1)^i \times \frac{i^r}{i+r}, i \in \mathbb{N} \right\}$$