

$$a_1 = 4, \quad d = \frac{a_1 - 4}{3} = 0$$

$$a_1 + 3d = 41$$

(۲)

$$+n = 7n + 33 \Rightarrow 2.8 = 7n + 33 \Rightarrow 17.8 = 7n \Rightarrow n = 2.54$$

و قباله اعدادی که به ۷ باقی مانده ۳ دارند  $\rightarrow 10, 17, 24, 31, \dots$

$$1.1 \rightarrow 1.1 \text{ اولین عدد صحیح}$$

$$997 = \text{آخرین عدد صحیح}$$

$$\frac{997 - 1.1}{7} + 1 = 141$$

(۲)

$$\left. \begin{array}{l} n=0 \rightarrow a_1 + a_2 + a_3 \neq 14 \\ n=1 \rightarrow a_2 + a_3 + a_4 = 9 \end{array} \right\} \Rightarrow a_1 - a_4 = 5 \Rightarrow a_1 - a_1 - 3d = 5 \Rightarrow d = -\frac{5}{3}$$

$$a_1 + a_2 + a_3 = 3a_1 + 3d = 14 \Rightarrow 3a_1 = 14 - 3d \Rightarrow a_1 = \frac{14 - 3d}{3}$$

$$a_{17} = 9 - 3d = -24 \Rightarrow a_{17} + a_{18} = -24 - 1 = -25$$

(۲)

$$a + 2d = 2^m - 1, \quad a + 3d = 2^{m+1} - 1 \Rightarrow d = \frac{2^{m+1} - (2^m - 1)}{1} = 2^m + 1 \Rightarrow d = \frac{2^m + 1}{1}$$

$$a = 2^m - 1 - 2d = \frac{2 \times 2^m - 2^m - 1}{1} = 2^m - 1 - 2(2^m + 1) = 2^m - 1 - 2^{m+1} - 2 = -2^{m+1} - 1$$

(۲)

$$(2^m - 1) + 2^{m+1} + (-2^{m+1} - 1) = 2 + 1 + 1 = 4$$

$$\left. \begin{array}{l} a_1 + 9d = a_1 - 14d = 8 \Rightarrow 23d = 8 \Rightarrow d = \frac{8}{23} \\ a_1 + 9d + a_1 + 14d = 28 \Rightarrow 2a_1 + 23d = 28 \end{array} \right\} \Rightarrow 2a_1 + 8 = 28 \Rightarrow 2a_1 = 20 \Rightarrow a_1 = 10$$

$$a_{11} = a_1 + 10d \Rightarrow 10 + 10 \times \frac{8}{23} = \frac{230 + 80}{23} = \frac{310}{23}$$

(۱)

