

الفادلاخواه د نعم جبهه دنا A.

19,5

-1

$$d = \frac{61 - \frac{1}{w}}{w} = \frac{1}{w} = V$$

$$\rightarrow a_n = (n-1)d + a_1$$

$$\rightarrow P_{01} = (n-1)V + 40$$

$$P_{01} + V - 40 = +Vn \rightarrow 141 = Vn \rightarrow n = 24$$

۲ - صلا و بیست و نه عدد.

$$101 \cdot 101 \cdot 115$$

$$Vn + 40 \leq 999 \rightarrow Vn \leq 959 \rightarrow n = 142 / 248 \dots \rightarrow \text{آخرین عدد} = 999$$

$$\frac{999 - 101}{V} + 1 = 142 \quad \text{✓}$$

-۳

$$a_n = a_1 + (n-1)d =$$

$$(a_1 + d) + (a_1 + (n+1)d) + (a_1 + (n+2)d) = -6n + 12 \leftarrow \text{جایگذاری}$$

$$3a_1 + (3n+3)d = -6n + 12 \xrightarrow{\text{تقسیم بر 3}} a_1 + (n+1)d = -2n + 4 \rightarrow d = -2$$

$$3a_1 + 3d = 12 \xrightarrow{\uparrow d} 3a_1 + 3(-2) = 12 \rightarrow 3a_1 - 6 = 12 \rightarrow 3a_1 = 18 \rightarrow a_1 = 6$$

$$a_n = 6 + (n-1)(-2) = 6 - 2n + 2 = 8 - 2n \rightarrow a_{17} = 8 - 2(17) = -26 \rightarrow a_1 + a_{17} = 6 + (-26) = -20$$

$$a_n = a + nd = r^n - r$$

$$a_1 = a + nd = r^{x+1}$$

$$a_n = a + nd = r^x - 1$$

$$d = a_{17} - a_1 = -26 \rightarrow (r^{17} - 1) - (r^{x+1} - 1) = -26 \rightarrow r^{17} - r^{x+1} = -26$$

$$d = \frac{r^{17} - 1}{17}$$

$$a_1 = r^{x+1} - r \rightarrow a_1 = \frac{1 \times r^{x+1} - r}{1} \Rightarrow a_n = a_1 + nd = r^{x+1} - r$$

$$r^{2x} - r = 3 \times r^x + 1 \quad r^{2x} - r \times r^x - 4 = 0$$

$$y = r^x \quad \text{✓}$$

$$y^2 - 3y - 4 = 0 \quad (y-4)(y+1) = 0 \quad y = 4 \rightarrow r^x = 4 \rightarrow x = 2$$

$$(r^{2x} - r) + (r^{2x+1}) + (r^x - 1) = 13 + 8 + 3 = 24$$

٥ - النداد خواص

② ✓

— 4 —

$$d = \frac{1}{K_1}$$

② ✓

$\frac{1}{x+1}$ $\frac{1}{x-1}$

② ✓

-9

② ✓

- 10

② ✓