

$$a_1 = f_0$$

$$a_{\infty} = 41$$

$$\frac{a_1 - f_0}{f - 1} = \frac{r_1}{f} = V$$

مسئله 1

$$\frac{v n + a}{v} = f_0$$

$$= 41 = 33$$

$$20.1 - 33 = 12.9 \quad 12.9 + v = \boxed{25}$$

$$r(a_1 = f_0) + r d$$

$$a_{\infty} = 41$$

الفرد برای برداشتن

$$f_0 + r d = 41$$

$$r d = 21 \quad d = v$$

10

مسئله 2

$$18xv = 91$$

$$91 + r = 1.1$$

$$18xv = 998 \quad 998 + r = 999$$

$$v n + r = 1.1 \quad n = 18 \quad v n + r = 999$$

$$n = 182$$

$$\frac{182 - 18}{1} + 1 = \boxed{179}$$

$$a_{n+1} + a_{n+r} + a_{n+r} = -9n + 12$$

مسئله 3

$$a_{n+1} + a_{n+r} = a_{n+r} = 4 \quad r a_{n+r} = 9n + 12 \quad r a_{n+r} = r(-2n + 4)$$

$$\text{if } n=10 \quad a_{10} = \frac{-2 \times 10}{-2} + 4 = -29$$

$$a_1 = \frac{-2 \times 4}{-12} + 4 = -1$$

$$\text{if } n=4$$

$$a_{10} + a_1 = -1 + -29 = \boxed{-30}$$

مسئله 4

$$r^x - 1 = a r$$

$$r^{x+1}$$

$$= a_1$$

$$r^{2x} - r = a_{10}$$

$$a r + a_{10} = a_1 + a_1$$

$$= 4 r^x - 1 + r^{2x} - r = r^x + r$$

$$r^{2x} + r^x - 4 = r^x + r$$

$$r^{2x} - 4 = r - r^x$$

$$r^{2x} - 4 = r^x (r - 1)$$

$$r^{2x} - 4 = r \times r^x$$

$$r^{2x} - r \times r^x - 4 = 0$$

$$\frac{r^2 - 1}{r} + \frac{r^2 + 1}{r} + \frac{r^2 - 4}{r} = \boxed{r^2}$$

$$(r^2 - 4)(r^2 + 1) = 0$$

$$= 4 \quad r = 2$$

MICRO

$$\left. \begin{aligned} a_{1r} - a_{1o} &= a \\ a_{1r} + a_{1o} &= 2a \end{aligned} \right\} \begin{aligned} \frac{2a + a}{r} &= 10 \Rightarrow a_{1r} \\ \frac{2a - a}{r} &= 10 \Rightarrow a_{1o} \end{aligned}$$

$$a_1 + 11d - a_1 - 9d = a$$

$$2d = a \quad \boxed{d = \frac{a}{2}}$$

$$a_{1o} = a_1 + \underbrace{9d}_{\frac{9a}{2}} = 10 \Rightarrow a_1 = \boxed{-12.5}$$

~~11d = 10~~
~~9d = 10~~

$$a_{1r} = -12.5 + \underbrace{9d}_{\frac{9 \times a}{2}} = \frac{+9a}{2}$$

سوال ٤

$$\frac{a}{r}(ra_1 + \epsilon d) = \frac{1}{r} \frac{a}{r} (a_1 + 2d + a_1 + 9d)$$

$$\frac{a}{r}(ra_1 + \epsilon d) = \frac{1}{r} \frac{a}{r} \underbrace{(ra_1 + \epsilon d)}_{a(a_1 + vd)}$$

$$\frac{ra_1 + \epsilon d}{r} = \epsilon r$$

$$a(a_1 + vd) = \frac{a}{r}(a_1 + vd) \quad ra + 9d = a + vd \quad ra = d \quad a = \frac{d}{r}$$

سوال ٥

$$t_n = t_n - r + 10 \quad \text{if } n = 9 \quad t_9 = t_9 + 10$$

$$\text{if } n = 12 \quad t_{12} = t_n + 10$$

$$-t_9 = -t_{12} + 10 \quad t_9 = t_{12} - 10$$

$$\text{if } n = 9 \quad t_9 = t_9 + 10$$

$$\text{if } n = 12 \quad t_{12} = t_9 + 10$$

$$t_{12} - 10 = t_9 + 10$$

$$a_1 + 11d - 10 = a_1 + 9d + 10$$

$$11d - 9d = 20 \quad 2d = 20 \quad d = 10$$

$$\epsilon. \quad r. \quad (a_1 + 10d)^r - (a_1 + 9d)^r$$

$$a_1^r + \epsilon_0^r + 10 \cdot a_1 - a_1^r - 9^r - \epsilon_0 \cdot a_1$$

$$= 9^r \epsilon_0 + 10 \cdot a_1$$

$$t_v = a_1 + \frac{9d}{r}$$

$$(a_1 + \frac{9d}{r})^r = 9^r \cdot a_1 + 10 \cdot a_1$$

$$\Rightarrow \boxed{r = \epsilon_0}$$

$$r + 6r \quad r(1 - 4r^2)$$

$$r - 12r^3$$

مسئله 1 <= 1

$$\frac{r(1 - 4r^2)}{r + 1} \quad \frac{r + 12r^3}{12 + 1} = \frac{12r^3}{12} = 4r^3$$

مسئله 9 <= 9

$$3r - r = 30 \quad \frac{30}{rn - r} = \frac{1a}{rn - 1} = d$$

والله اعلم

$$n+1 = r + (n+1-1) \frac{1a}{rn-1} = 4r + \frac{1an}{rn-1} = 11 \quad \frac{1an}{rn-1} = 9$$

$$11n - 9 = 1an \quad rn = 9 \quad n = 3$$

مسئله 10 <= 10

$$an = 3a_1$$

$$an + an + 8 = ar + a_1v \quad a_1 + vd = r(a_1 + rd) \quad a_1 + vd = 3a_1 + 9d$$

$$3 + 1v = 3 \quad n + n + 8 = 3 \quad 4n = v \quad a_r = a_1 + d$$

$$-a_1 + a_1 = 0$$

$$-va_1 = rd$$

$$-a_1 = d$$