

٢٠

Subject :

تکلیف دوازدهم

دوره ۱۲

کتابخانه

Date :

$$t_n = 5, 9, 13, 17, \dots$$

+2 +2 +2

مسئله ۱

$$t_n = 4n + 1$$

$$t_{10} = 4 \times 10 + 1 = 41$$

الف)

ب)

مسئله ۲

$$t_n = 4, 10, 16, 22, \dots$$

+6 +6 +6

الف)

ب)

$$t_n = 6n + 2$$

$$a \frac{n}{n} (a_1 + a_n) = 24 \quad 4 \times 10 + 2 = 42$$

$$t_{19} + t_{10} + t_{11} + t_{12} = 5n = \frac{n}{r} (a_1 + a_n) = 4 \quad 2(118 + 130) = 498$$

$$t_{19} = 4 \times 19 + 2 = 78 \quad t_{12} = 4 \times 12 + 2 = 50$$

مسئله ۳

$$1 + r^2, 2, 3 - r^2$$

1-r^2 1-r^2

$$r^3, r^4, r^5$$

$$d = 1 - r^2$$

$$t_{12} = 1 + r^2 + r^2(1 - r^2)$$

$$t_{12} = 1 + r^2 + r^2 - r^4$$

$$t_{12} = 2 - r^4$$

$$t_{10} = 1 + r^2 + r^2(1 - r^2)$$

$$t_{10} = 1 + r^2 + r^2 - r^4$$

$$20 - 2r^4$$

$$20 - 2r^4 - (2 - 2r^4) =$$

$$18 - 2r^4 = 18 - 2r^4$$

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

$$1 - r^4 - r^2 = 1 - r^4 - r^2$$

راه دوم

Subject :

$$a_n = a^{r\alpha}, r \times a^{r\alpha}, a^y, \dots$$

$$\rightarrow r \times a^{r\alpha} - a^{r\alpha} = a^y - r \times a^{r\alpha}$$

سوال $\leq r$

$$b_n = \alpha, r, y, \dots$$

$$\alpha + y = r \quad y = r - \alpha$$

$$y = r\alpha + 1$$

$$r - \alpha = r\alpha + 1$$

$$r\alpha = r \quad \alpha = 1$$

$$y = r + 1 = r$$

$$xy = 1 \times r = \boxed{r}$$

$$a_n = r\alpha - \varepsilon, r\alpha - 1, 9\alpha, \dots$$

$$r\alpha - \varepsilon + 9\alpha = r\alpha - r$$

$$1\alpha - \varepsilon = \varepsilon\alpha - r \quad r\alpha = r \quad \alpha = \frac{1}{r}$$

سوال $\leq a$

$$-r, 0, r, \dots \quad a_n = 3n - 9$$

$$r \times \varepsilon - 9 \leq 9$$

سوال ≤ 9

$$a_n = r, 2r, 3r, \dots$$

$$b_n = r, 2r, 3r, \dots$$

$$r(n+1)$$

$$r \times r \times 1 = r^2$$

$$r(n-1)$$

$$r \times r \times 0 = 0$$

$$a_n = 11a, \dots \quad 4n - 1 \leq 41$$

$$5n \leq 42$$

$$n \leq 8$$

سوال ≤ 8

$$a_1 + a_r + a_r = r^2$$

$$-r^2 - ar - ar = -r^2$$

$$a_1 + ar + a_r = 10a$$

$$a_1 + rd - (a_1 + d) = 1\varepsilon \quad a_1 + \varepsilon d - a_1 - d = 1\varepsilon \quad rd = 1\varepsilon \quad d = r\alpha$$

$$a_1 + a_r = V \quad a_1 + a_r + a_r = V \quad \rightarrow a_1 = r^2$$

$$a_1 + a_r + a_r = V$$

$$\frac{+V}{-r^2} = \left[-\frac{1}{r} \quad a_1, n, k \right]$$

MICRO

$$a_1 + a_r + a_w = 10$$

$$a_e + a_o = 20$$

$$ra_1 + rd = 20$$

$$-ra_1 - rd = -10$$

← 1 سوال

2

$$ra_1 + rd = 10 \quad a_1 + d = 10$$

$$ad = 10 \quad d = 2$$

$$ra_1 + 9 = 10$$

$$ra_1 = 1 \quad a_1 = 2$$

$$a_{10} = 2 + \frac{9 \times 2}{2} = 29$$

← 9 سوال

$$S_9 = 9 S_r$$

$$a_1 + a_r + \dots + a_9 = 9(a_1 + a_r + a_w)$$

$$\frac{9}{r} [ra_1 + 10d] = 9 \left[\frac{r}{r} (ra_1 + rd) \right]$$

$$9a_1 - rva_1 = -r9d + rvd$$

$$9a_1 + r9d = rva_1 + rvd$$

$$8a_1 = r9d \quad a_1 = \frac{r}{8}d$$

$$\frac{a_r}{a_v} = \frac{a_1 + 19d}{a_1 + d} = 4 \quad \frac{\frac{r}{8}d + 19d}{\frac{r}{8}d + d} = \frac{\frac{r}{8}d + 152d}{\frac{r}{8}d + d} = \frac{152r + 1216}{r + 8} = 4$$

← 10 سوال

$$a_1 = 11$$

$$11 + 9d = 20$$

$$a_e = a_1 + rd$$

$$a_v = 20$$

$$9d = 9$$

$$a_e = 11 + 12$$

$$d = 1$$

$$a_e = 23$$

$$23 = 11 + 12$$

$$23 = 11 + 12$$

$$-12 = 12$$

$$-a = d$$