

$$44(44, \dots, 11) \Rightarrow \frac{44+11}{2} = 27.5 \checkmark$$

-1 (2)

$$(1, \dots, 2), (4, \dots, 12), (12, \dots, 29), (6, \dots, 120), (12, \dots, 242) \rightarrow \frac{121+242}{2} = 181.5 \checkmark$$

$$a = \frac{1}{v_0} \times 1^2 = -\frac{1}{d} \Rightarrow -\frac{1}{d} \times 20 + db + c \Rightarrow db + c = 19$$

صفر - صفر بعد براب نوشتیم

$$c = -19, b = 4$$

(2)

$$\frac{t_{10}}{t_1} = \frac{-\frac{1}{d} + 2 = \frac{14}{d}}{-\frac{1}{d} \times 10^2 + 4 \times 10 - 1 = 14} \Rightarrow \frac{14}{14} = 1 \checkmark$$

-5

$$a_{10} = 2d + a_1 \Rightarrow a_{10} = 2d + a_1$$

$$a_v - a_r = t_1 - t_f \Rightarrow \Delta A_a = 2d$$

راصلت غلطه!

جواب صفر بعد...

$$4a^2 + 12ad + 9d^2 = 2a^2 + 10ad + 2a^2 + 20d \Rightarrow 2a^2 + ad - 9d^2 \Rightarrow a = -2d$$

$$9a = \frac{r}{r} d \Rightarrow a_f = a + rd \begin{cases} a_f = d \checkmark \\ a_f = \frac{9}{r} d \checkmark \end{cases}$$

$$\frac{a^2}{f} = \frac{c}{f} \times b \Rightarrow a^2 = cb \times a^2 = (a \times d)(a + rd) \Rightarrow a^2 = a^2 + ra d + rd^2$$

$$\Rightarrow rad = -rd^2 \Rightarrow r = -1 \Rightarrow 2r = -2 \checkmark$$

$$fa = r^2 b + c \Rightarrow ra = r^2 ar + ar^2 h r^2 + r^2 r^2 = 0$$

$$h(r+r^2)(r+1) = 0 \Rightarrow r = -1 \Rightarrow \frac{a}{9} = r = -1 \Rightarrow -4r \checkmark$$

(2)

$$\frac{ar^2}{ar^2} + \frac{ar}{ar} = 2 \Rightarrow 2a^2 - ar - r^2 = 0 \Rightarrow r = -2a \Rightarrow \frac{a}{4r} = \frac{a}{-2a} \Rightarrow \begin{cases} \frac{a}{ar} = 1 \checkmark \\ \frac{a}{ar} = -1 \checkmark \end{cases}$$

$$a_r = a_f \Rightarrow a_r^f = a_r^f \times a = \frac{1}{r} \Rightarrow a_d = 2v \Rightarrow dr = 2$$

-10 (2)

$$a = \frac{1}{r} \Rightarrow \frac{1}{r} - \frac{1}{r} = \frac{1}{9} \checkmark$$

$$a_r = b_r \rightarrow a_1 + rd = b_r$$

$$a_n = b_n \rightarrow a_1 + nd = b_n \rightarrow b_n - b_r = fd$$

تفاوت خطی $\rightarrow b_n = Cn + K$

$$b_n - b_r = nC + K - (rC + K) = \Delta C$$

$$fd = \Delta C$$

دنباله حسابی a
 تسوی خطی b

$$b_{10} = 0 \rightarrow 10C + K = 0 \rightarrow K = -10C$$

$$\frac{b_{10}}{d} = \frac{10C + K}{\frac{\Delta}{C}C} = 4$$

صابطه اول $a_0, a_3, a_4, a_9 \rightarrow$

صابطه دوم $a_1, a_4, a_7 \rightarrow$

صابطه سوم $a_2, a_5, a_8 \rightarrow$

$$S_{10} = 1 + 4 + (1+a) + 2 + (1+a) + 4 + 0 + (2+a) + 8 = 19 \rightarrow a = -2$$

جمع جملات خواسته شده از صابطه سوم به دست میاد :

$$a_n = \left[\frac{n}{K+2} \right] - 2 \xrightarrow{n=3K+2} \left[\frac{3K+2}{K+2} \right] - 2 = \left[2 + \frac{K-2}{K+2} \right] - 2 = \left[\frac{K-2}{K+2} \right]$$

این عبارت به ازای $K=0$ برابر ۱- و به ازای بقیه اعداد صحیح پس جواب خواسته شده ۲-.