

$$الف) t_n = n^2 - 9n + 2 = \min \left\{ -\frac{b}{2a} = \frac{9}{2} = 4.5 \right\}$$

دئاس کوی

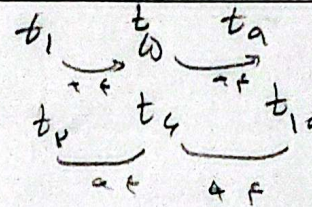
6
1.50

$$ب) t_n = n^2 + 9n + 1 = \min \left\{ -\frac{b}{2a} = -\frac{9}{2} = -4.5 \right\}$$

$t_{10} + \min = 4$

n عدد طبیعی است نه توانده مقدر باشد

$$\begin{aligned} t_1 &= -4 & t_5 &= -4 & t_9 &= -4 \\ t_2 &= -5 & t_6 &= -5 & t_{10} &= -5 \\ t_3 &= -1 & t_7 &= -1 & & \\ t_4 &= -5 & t_8 &= -5 & & \end{aligned}$$



1.50

7

$$t_n = an^2 + bn + c$$

$$t_n = -4, -5, -1, -5, \dots$$

$$\begin{aligned} a_1 &= -4 & \begin{cases} a_1 = 1(1)^2 + b(1) + c = -4 \Rightarrow 1 + b + c = -4 \\ a_2 = -1 & \begin{cases} a_2 = 1(2)^2 + b(2) + c = -1 \Rightarrow 4 + 2b + c = -1 \end{cases} \end{cases} \\ & & \Rightarrow \begin{cases} 1 + b + c = -4 \\ 4 + 2b + c = -1 \end{cases} \end{aligned}$$

$$t_n = 1n^2 + n - 4$$

$t_{10} = 100 + 10 - 4 = 106$

$t_n < 2n^2 - n + 7 \rightarrow$

$$t_{10} = 100 + 10 - 4 = 106$$

$$\begin{aligned} c &= -4 \\ f + b &= 5 \\ c &= 9 \\ b &= 1 \end{aligned}$$

1.50

اشتراک هیچ بازه ای متناهی نیست مگر اینکه تهی باشد

$$a + 4 \neq 2a + 1$$

$a \neq 3$

$$2a + 1 > a + 4$$

$$a > 3$$

اشتراک تهی باشد

$$2a + 1 = a + 4$$

$$a = 3$$

اشتراک یک نقطه باشد

0

9

$$\frac{100 - 5}{5} + 1 = 39$$

$$34 + 20 - 9 = 45$$

$$\frac{99 - 3}{3} + 1 = 33$$

$$\frac{95 - 15}{15} + 1 = 6$$

2

10

$$-4, -1, +1, +2, \dots$$

$$\begin{array}{cccc} & \nearrow & \nearrow & \nearrow \\ -4 & -1 & +1 & +2 \\ \nearrow & \nearrow & \nearrow & \\ +2 & +2 & +2 & \end{array}$$

$$Pa = 2$$

$$a < 1$$

سوال ٧

$$\left\{ \begin{array}{l} t_{1c} = -4 \rightarrow a + c + b = -4 \\ t_{2c} = -1 \rightarrow 2a + 2b + c = -1 \end{array} \right.$$

$$b = -4$$

$$c = 1$$

$$t_n = n^2 - 4n + 1$$

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

$$-4, -1, +1, +2$$

$$\begin{array}{ccc} & \nearrow & \nearrow \\ -4 & -1 & +1 \\ & \nearrow & \nearrow \\ +2 & +2 & \end{array}$$

$$Pa < 2 \rightarrow a < 2$$

سوال ٨

$$\left\{ \begin{array}{l} t_{1c} = -4 \rightarrow a + b + c = -4 \\ t_{2c} = -1 \rightarrow 2a + 2b + c = -1 \end{array} \right.$$

$$b + c = -1$$

$$2b + c = -1 \rightarrow b = -1$$

$$c = -1$$

$$t_n = n^2 - n - 1$$