

$$r-1 = 2, 3, 4, 5, 6, \dots$$

$$\begin{matrix} \{2\} & \{11\} & \{24\} & \{57\} & \{74\} \\ (2) & (2) & (2) & (2) & (2) \end{matrix}$$

الف ١

$$\begin{matrix} \frac{2}{2} & \frac{11}{4} & \frac{24}{4} & \frac{57}{4} & \frac{74}{4} \\ (2) & (2) & (2) & (2) & (2) \end{matrix}$$

ب

$$r_n = 14 \Rightarrow \frac{(-1)^{14}}{\sqrt{14+1}} = \frac{-1}{\sqrt{15}} \Rightarrow \begin{matrix} ① = \frac{-1}{-2} = \frac{1}{2} \\ ② = \frac{-1}{2} = -\frac{1}{2} \end{matrix}$$

الف ٢

$$r_n = 14 \Rightarrow r \times 14 - \left[\frac{14}{r} \right] = r \times 14 - [r, 14] = r \times 14 - r = 14 - r = 13$$

$$r_n - 1 = 0 \Rightarrow r_n = 1 \Rightarrow n = 14$$

$$\begin{matrix} 14 \\ - & + \end{matrix} \Rightarrow \text{مشتق}$$

الف ٣

$$n^2 - 12n + 10 = (n-2)(n-5) \Rightarrow \begin{matrix} n=2 \\ n=5 \end{matrix}$$

$$\begin{matrix} 2 & 5 \\ + & - & + \end{matrix} \Rightarrow \text{مشتق} = 9 - 5 + 1 = 5$$

ب

$$r_n - 14 = 0 \Rightarrow n = \frac{14}{r} = 14$$

$$\begin{matrix} 14 \\ - & + \end{matrix} \Rightarrow \text{مشتق} = 14$$

الف ٤

$$n^2 - 12n + 25 = (n-2)(n-9) \Rightarrow \begin{matrix} n=2 \\ n=9 \end{matrix}$$

$$\begin{matrix} 2 & 9 \\ + & - & + \end{matrix} \Rightarrow \text{مشتق} = 9 - 2 + 1 = 8$$

ب

$$\begin{matrix} n=2 \Rightarrow 2a+b=14 \\ n=9 \Rightarrow 9a+b=22 \end{matrix} \xrightarrow{r-1} \begin{cases} -8a-14 = -14 \\ 9a+b=22 \end{cases} \Rightarrow \begin{cases} 14+b=14 \\ b=-14 \end{cases}$$

$$\frac{9a+b}{14a=14} \Rightarrow a=1$$

الف ٥

$$r_n = 2 \Rightarrow r_n - 14 = r \times 2 - 14 = 4$$

$n^2 - 4n + 2 \Rightarrow$
 1) min $\Rightarrow \frac{-b}{2a} = \frac{4}{2} = 2 \Rightarrow$ مقدار $= (2)^2 - 4(2) + 2 = 4 - 8 + 2 = -2$ (انت) ④

$n^2 + 4n + 1 \Rightarrow$
 1) min $\Rightarrow \frac{-b}{2a} = \frac{-4}{2} = -2 \Rightarrow$ مقدار $= (-2)^2 + 4(-2) + 1 = 4 - 8 + 1 = -3$ (ب) ⑤
 چند تابع غیر یکنواخت باشد

$-4, -1, 1, 3, \dots$
 $\left\{ \begin{array}{l} 2a = 2 \Rightarrow a = 1 \\ a + b + c = -2 \\ 1 + b = -2 \Rightarrow b = -3 \end{array} \right\}$
 از طرف
 $c - 1 = -2 \Rightarrow c = -1$
 $\frac{f_{max}}{f_{min}} = \frac{n^2 - 4n + 1}{1}$

$t_n = 1 \Rightarrow t_{10} = (10)^2 - 4(10) + 1 = 100 - 40 + 1 = 61$

$-4, -1, 1, 3, \dots$
 $\left\{ \begin{array}{l} a + b + c = -4 \\ c + 1 = -4 \Rightarrow c = -5 \\ b = -1 \end{array} \right\} \Rightarrow$ ⑥
 $n^2 - n - 5$

$2a + 1 \geq a + 2 \Rightarrow a \geq 1$
 حالت اول
 $a + 2$
 $2a + 1$

حالت دوم
 $a + 2$
 $2a + 1$

$A \cup B \rightarrow \Delta \cup \Psi$
 $n(A \cup B) = n(A) + n(B) - n(A \cap B)$
 $n(A \cup B) = 33 + 10 - 4 = 39$

$A \cap B = 10$ (ع)
 $n(A \cap B) = \frac{90 - 10}{10} + 1 = 9$

$B = 10$ (ب)
 $n(B) = \frac{100 - 10}{10} + 1 = 10$

$A = 33$ (ا)
 $n(A) = \frac{99 - 33}{33} + 1 = 33$