

تابع min است چون  $a > 0$ .

الف)  $y = 2n^2 - 2n + 1$   
 ext  $\left| \begin{array}{l} -\frac{b}{2a} \rightarrow \frac{1}{2} = 1 \\ -\frac{\Delta}{4a} \rightarrow 2(1) - 2(1) + 1 = -1 \end{array} \right. \rightarrow \text{ext} \left| \begin{array}{l} 1 \\ -1 \end{array} \right.$

ب)  $y = -2n^2 + 2n - 1$   
 ext  $\left| \begin{array}{l} -\frac{b}{2a} \rightarrow -\frac{1}{-2} = \frac{1}{2} \text{ چون } a < 0 \\ -\frac{\Delta}{4a} \rightarrow \frac{4ac - b^2}{4a} = \frac{4(0) - 4}{-4} = -\frac{1}{1} \end{array} \right.$

الف)  $y = n^2 - 4n + 1 \xrightarrow{a > 0} c = 1$   
 ext  $\left| \begin{array}{l} -\frac{b}{2a} \rightarrow \frac{2}{1} = 2 \\ -\frac{\Delta}{4a} \rightarrow (2)^2 - 4(2) + 1 = -1 \end{array} \right.$

ب)  $y = -n^2 + 2n + 1 \xrightarrow{a < 0} c = 1$   
 ext  $\left| \begin{array}{l} -\frac{b}{2a} \rightarrow \frac{-2}{-2} = 1 \\ -\frac{\Delta}{4a} \rightarrow (1)^2 + 2(1) + 1 = 4 \end{array} \right.$

$n^2 - 5n + 6 \xrightarrow{S} \alpha + \beta = 5 \xrightarrow{P} \alpha\beta = 6 \rightarrow n^2 - 5n + 6 = (n-2)(n-3)$

$n^2 - 5n + 6 \xrightarrow{S} \alpha + \beta = 1 \xrightarrow{P} \alpha\beta = -2 \rightarrow n^2 - n - 2 = (n-2)(n+1)$

if  $\alpha = -1 \rightarrow 2n^2 + kn^2 - 9n - 2 = 0 \rightarrow -2 + k + 9 - 2 = 0 \rightarrow k = -3$

$\sqrt{\alpha} - \sqrt{\beta} = 1 \xrightarrow{S} \alpha + \beta - 2\sqrt{\alpha\beta} = 1 \rightarrow 5 - 2\sqrt{6} = 1$

$\rightarrow 2\sqrt{6} = 4 \rightarrow \sqrt{6} = 2 \rightarrow 6 = 4$  (Contradiction)

$\rightarrow 2m - 2\sqrt{m} = 1 \rightarrow \sqrt{m} = 1, -\frac{1}{2} \rightarrow m = 1 \rightarrow 2m^2 + n - 1 = 0$

$\rightarrow P = \frac{c}{a} = -\frac{1}{2}$

$y = 2n^2 - (m+2)n + m \quad \alpha - \beta = \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{(m+2)^2 - 4m}}{2} = \frac{\sqrt{(m-2)^2}}{2} = \frac{|m-2|}{2}$

$S = \frac{1}{2} \times \frac{|m-2|}{2} m = \frac{m}{2} \rightarrow |m-2|m = 2 \rightarrow m^2 - 2m = 2 \rightarrow m^2 - 2m - 2 = 0$

$\begin{cases} y = n^2 - mn + 1 \\ y = n^2 - 3n + 1 \rightarrow n = -\frac{b}{2a} = \frac{3}{2} \\ y = n^2 + n + 1 \rightarrow n = -\frac{b}{2a} = -\frac{1}{2} \end{cases}$

$\begin{cases} m = 3 \\ m = -1 \end{cases}$

$$a \cdot \frac{q}{ra} = \frac{q}{ra} \quad y_{min}$$

$$y = an^r + rn + a$$

$$n_s = -\frac{b}{ra} = -\frac{r}{ra}$$

$$\Delta = 49 + 2\sqrt{4} = 4\sqrt{4}$$

$$a \left(-\frac{r}{ra}\right)^r + r \left(-\frac{r}{ra}\right) + a = \frac{V}{\lambda}$$

$$\frac{-9 + ra^r}{ra} = \frac{V}{\lambda} \rightarrow \lambda a^r - Va - 11 = 0$$

جواب:  $\frac{1}{2}$

$$\lambda a^r - Va - 11 = 0$$

$$a = \frac{V \pm \sqrt{4rs}}{1r}$$

$$a_1 = \frac{V + rs}{1r} = 2$$

$$a_2 = -\frac{11}{1r} = -\frac{9}{1}$$

$$n^r - (a+1)n + a = 0 \quad \begin{cases} a+b+c=0 \\ n_1 = \frac{S}{a} = 1 \\ n_2 = 1 \end{cases}$$

در سوال  $a=3$

$$n^r - (ra+1)n + b = 0$$

$$\rightarrow n^r - 10n + b = 0 \quad S=10 \quad \begin{cases} n_1 = r \\ n_2 = 9 \end{cases}$$

از سوال  $r=4$

$$P_2 - P_1 = (4 \times 10) - (10 \times 1) = 30$$

$$y_1 = -an^r + an + r \rightarrow \text{ext} \quad \begin{cases} -\frac{b}{ra} \rightarrow -\frac{a}{ra} = \frac{1}{r} \\ -\frac{a}{ra} \rightarrow -\frac{a}{r} + \frac{a}{r} + r = \frac{a+r}{r} \end{cases}$$

$$y_2 = rbn^r - bn - 1 \rightarrow \text{ext} \quad \begin{cases} -\frac{b}{ra} \rightarrow \frac{b}{ra} = \frac{1}{r} \\ -\frac{b}{ra} \rightarrow \frac{b}{r} - \frac{b}{r} - 1 = \frac{-b-1}{1} \end{cases}$$

$$\frac{b}{r} - \frac{b}{r} + 1 = \frac{a+r}{r} \rightarrow a = -12$$

$$\frac{r}{r} - r + r = -\frac{1}{r} \rightarrow \frac{-b-1}{1} = -\frac{1}{r} \rightarrow b+1 = 2 \rightarrow b = -4$$

if  $\beta > \alpha$ ,  $y = r\alpha a n^r + rn + \beta \rightarrow \alpha + \beta = -\frac{r}{ra}$

( $\alpha, \beta$ :  $\omega$   $\beta$ )

$\alpha\beta = \frac{\beta}{ra} \rightarrow r\alpha a^r = 1$

$a^r = \frac{1}{ra} \rightarrow a = \pm \frac{1}{\omega}$

if  $\alpha = \frac{1}{\omega} \rightarrow \beta = -1$

if  $\alpha = -\frac{1}{\omega} \rightarrow \beta = 1$

$y = -\omega \times \frac{r}{ra} + \frac{1}{\omega} + 1 = \frac{9}{a}$

$$y = n^r - (a^r + b^r - 12)n + a + b - 1 = 0$$

$$S = a^r + b^r - 12 \rightarrow S = \alpha + \beta$$

$$P = a + b - 1 \rightarrow P = S - 1$$

$$S = S^r - 2P - 12 \rightarrow ab = a + b - 1$$

$$S = S^r - 2(S-1) - 12 \rightarrow S^r - 3S - 10 = 0$$

$$(S-5)(S+2) = 0 \rightarrow S = 5$$