

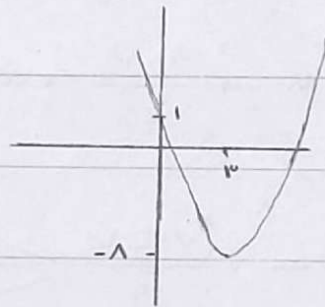
19, 17, 15

1)  $a > 0 \rightarrow \min U$  ext  $\left| \begin{array}{l} -\frac{b}{2a} \\ -\frac{\Delta}{4a} \end{array} \right.$

$\frac{f}{f} = 1$   $\frac{-(14-1)}{1} = -1 \rightsquigarrow \text{ext} \left| \begin{array}{l} 1 \\ -1 \end{array} \right. \checkmark$

$\rightarrow) a < 0 \rightarrow \max \cap$   $\frac{-r}{-r} = \frac{r}{r}$   $\frac{-(9-4)}{-1} = \frac{-5}{-1}$  ext  $\left| \begin{array}{l} \frac{r}{r} \\ -\frac{r}{r} \end{array} \right. \checkmark$

2)  $x = \frac{-b}{2a} \rightarrow \frac{9}{2} = 4.5 \checkmark$

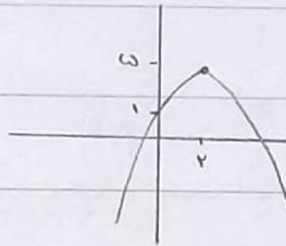


$y = x^2 - 9x + 1$   $x = 4.5$   $9 - 18 + 1 = -8$

$a > 0 \rightarrow \min U$

$\rightarrow) x = \frac{-b}{2a} = \frac{-r}{-r} = r \checkmark$

$x = r$   $-r + 1 + 1 = 2$



$a < 0 \rightarrow \max \cap$

3)  $\alpha + \beta = -\frac{b}{a} = 1 \checkmark \rightarrow x^2 - 5x + p = 0 \rightarrow \begin{cases} x^2 - 1 - r = 0 \\ (x+1)(x-r) \\ x=-1 \quad x=r \end{cases}$

$\alpha\beta = \frac{c}{a} = -r \checkmark$

$x = r \rightarrow r^2 + r^2 - 18 - r = 0 \rightarrow 11 + r^2 = 0 \rightarrow r = -3 \checkmark$

4)  $(\sqrt{\alpha} - \sqrt{\beta} = 1)^2 \rightarrow \alpha + \beta - 2\sqrt{\alpha\beta} = 1 \rightarrow 3m - 2\sqrt{m} = 1$  اگر  $\alpha, \beta$  کے مابین تعلق ہے

$t^2 - r^2 - 1 = 0 \rightarrow t^2 - r^2 - r = 0 \rightarrow \frac{(t+1)}{-\frac{1}{r}} \frac{(t-r)}{1} \rightarrow \sqrt{m} = 1 \checkmark \sqrt{m} = -\frac{1}{r}$

$x^2 - mx - m = 0 \xrightarrow{m=1} rx^2 - x - 1 = 0$   $\frac{c}{a} = \frac{-1}{r}$



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⑤  $rx^r - (m+r)x + m \xrightarrow{a+b+c=0} x=1, x=\frac{m}{r}$  ,  $(\log m)$

$\frac{1}{r} (m(\frac{m}{r}-1)) = \frac{r}{r} \rightarrow \frac{m(m-r)}{r} = \frac{r}{r} \rightarrow m^r - rm - r = 0$

$\frac{(m+1)(m-r)}{m=-1 \quad m=r} \xrightarrow{\frac{-b}{ra} = 0} x^r - mx + 1 \rightarrow \frac{m}{r} \rightarrow \left[ \frac{r}{r} \right]$

$\rightarrow \left[ -\frac{1}{r} \right]$

\* ⑥  $\frac{-b}{ra} = \frac{-r}{ra} = x \xrightarrow{\frac{0}{x}} a \left(-\frac{r}{ra}\right)^r + r \left(-\frac{r}{ra}\right) + a$

$\frac{9a}{fa^r} - \frac{9}{ra} + a \rightarrow \frac{9-11}{fa} + a \rightarrow a - \frac{9}{fa} = \frac{1}{\Delta} \times 19 \Delta a^r - \Delta a - 11 = 0$

$\Delta = \frac{r^2}{4} \pm \sqrt{\frac{r^2}{4} - 19} \rightarrow a = \frac{r}{\Delta} \rightarrow \text{min} = \text{مقدار} = a > 0$

$a = -\frac{9}{\Delta}$

⑦  $\text{أرئيشها} = \alpha \rightarrow \alpha, \alpha+r$

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

$\frac{c}{a} = a \rightarrow \alpha^r + r\alpha = r\alpha + 1 \rightarrow \alpha = +1 \rightarrow \text{ارطفي اعداد طبيعي بوجه و ا- غنن}$

$\xrightarrow{x=1} a = r \times 1 + 1 = r^*$

$\text{أرئيشها} = r \rightarrow r\beta, r\beta+r$

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

$\frac{c}{a} \rightarrow r\beta(r\beta+r) \rightarrow f(y) = r\beta \rightarrow \boxed{r\beta - r = 1}$

\* 1)  $y = -ax^r + ax + r \rightarrow S\left(\frac{1}{r}, \frac{a}{r} + r\right)$   
 2)  $y = rbx^r - bx - 1 \rightarrow S\left(\frac{1}{r}, \frac{-b}{r} - 1\right)$

$(rb \times \frac{1}{r}) - (b \times \frac{1}{r}) - 1 = \frac{a+r}{r}$   
 $\frac{b}{r} - \frac{b}{r} - 1 = \frac{a+r}{r}$

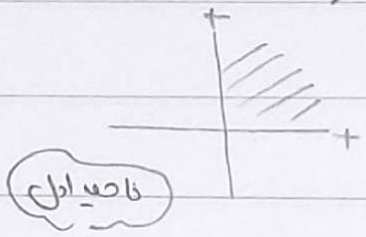
$(-a \times \frac{1}{r}) + (a \times \frac{1}{r}) + r = \frac{-b}{r} - 1$   
 $\frac{-a}{r} + \frac{a}{r} + r = \frac{-b}{r} - 1$   
 $a+r = r \rightarrow a = -r$   
 $\frac{-b}{r} = \frac{r}{r} \rightarrow b = -r$

$b - a = -r + r = 0$

9)  $\frac{-b}{a} = \alpha + \beta = \frac{-r}{ra}$   
 $\alpha = \frac{1}{a} \rightarrow \beta = -1$  /  $a = -\frac{1}{a} \rightarrow \beta = 1$   
 \* در این حالت شرط  $\alpha < \beta$  قبل است

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

$y = -ax^r + rx + 1 \rightarrow \frac{-b}{ra} = \frac{-r}{-1} = \frac{r}{1}$   
 $\frac{-a}{ra} = \frac{r}{a}$



10)  $x^r - (a^r + b^r - 1r)x + \frac{c}{a+b-1} = 0$   
 11)  $a+b = \frac{-b}{a} \rightarrow a^r + b^r - 1r$

$(a+b)^r - rab = a^r + b^r$   
 $(a+b)^r - r(a+b-1) = a+b + 1r$

$a+b = t \rightarrow t^r - r(t-1) = t + 1r \rightarrow t^r - rt + r - t - 1r = 0 \rightarrow t^r - (r+1)t + r = 0$

$(t+r)(t-1) \rightarrow a+b = -r$   
 $a+b = 1$

قابل قبول است چون  
 a و b اعداد صحیح هستند



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