

$$y = -x^2 + bx + 12 \rightarrow \frac{-b}{2a} = 12 \rightarrow \frac{-(b^2 - 4ac)}{2a} = 12 \rightarrow \frac{b^2 + 12}{-4} = 12 \rightarrow \frac{b^2 + 12}{4} = 12$$

$$b^2 + 12 = 48 \rightarrow b^2 = 36 \rightarrow b = \pm 6$$

$$b = 6 \rightarrow 12 \rightarrow -x^2 + 6x + 12 \checkmark$$

$$b = -6 \rightarrow -x^2 - 6x + 12 \checkmark$$

مورد اول $\rightarrow b = \pm 6$

الف) $f(x) = x^2 + 4x + 12$

$$x^2 + 4x + 12 = 0 \rightarrow \Delta = b^2 - 4ac = 16 - 48 = -32$$

معادله در حقیقت حل ندارد

بسیار از این مسأله مقدار از Δ معادله میزنند

ب) $f(x) = (x - a)^2 - 2(x - a^2) - 10$

$$x^2 - ax + a^2 = x^2 - 2x + 2a^2 - 10 \rightarrow (x - a)(x + a) = (x - 2)(x + 10)$$

عوض $x = a \rightarrow a^2 = 1$

$$x^2 - a^2 = -3 \rightarrow x^2 = 1 \rightarrow x = \pm 1$$

$$x^2 - 14x + m = 0 \rightarrow \frac{-b}{a} = a + \beta \rightarrow a = \beta + 14 \rightarrow \frac{14}{1} = \beta + 14 \rightarrow \beta = -14$$

$$2\beta + 12 = 1 \rightarrow \beta = -1, a = 13 \rightarrow S = \frac{c}{a} = \frac{m}{1} = 13 \times 1 = \frac{m}{1} = 13 \rightarrow m = 13$$

$m = 13, a = 13, \beta = -1$

$$x^2 - 9x + m - 1 = 0 \quad 4a - 3 = 1 \rightarrow \beta = 4a - 3 = \frac{-b}{a} = 3 \rightarrow a + \beta = 4$$

$$a + 4a - 3 = 4 \rightarrow a = 2, \beta = 1 \rightarrow \frac{m-1}{1} = \frac{c}{a} = 2 \rightarrow m - 1 = 2 \rightarrow m = 3$$

$$-mx^2 + 6x + m^2 - 1 = 0 \quad AB = a \times \frac{1}{a} = 1 \rightarrow \frac{c}{a} = \frac{m^2 - 1}{-m} = 1$$

$$m^2 - 1 = -m \rightarrow m^2 + m - 1 = 0 \rightarrow (m + 1)(m - 1) = 0 \rightarrow m = 1, -1$$

$m = -1 \rightarrow \Delta < 0$ $m = 1 \rightarrow \Delta > 0 \checkmark \rightarrow m = 1$

$a^r - m + p = 0 \quad aB^r < f \rightarrow aB \times B < f \rightarrow f \times B < f \rightarrow B < \frac{f}{f}, a < \frac{q}{f}$ $\frac{f}{f} + \frac{q}{f} < \frac{1q + pV}{1f} < \frac{f^r}{1f} = \frac{+m}{u} < \boxed{m < \frac{f^r}{1f}}$	6
$a^r - f_{out} + m = 0 \quad a < fB \rightarrow \frac{-b}{a} < u + B < f < fB + B \Leftrightarrow B < 1, a < f$ $aB < \frac{m}{1} = f \times 1 \rightarrow \boxed{m < f}$	7
$a^r - Va + p = 0 \quad a^r + \frac{1}{a^r} \rightarrow \frac{c}{a} < f = aB \rightarrow aB^r < 1 \rightarrow a^r = \frac{1}{B^r}$ $a^r + \frac{1}{\frac{A}{B^r}} < a^r + B^r = s^r - rsp < rfp - f \times s = \boxed{ r_0 }$	8
$h(t) = 1.0t^r + 0.0t \rightarrow \max_y \rightarrow \frac{-0}{2a} = \frac{b^r - fac}{-fa} = \frac{0.1}{f_1} = \frac{0.1 \times 10^3}{f_1} = 4110$ $-1.0t^r + 0.0t = 0 \rightarrow t^r - 0t = 0 \rightarrow t(t-0) = 0 \rightarrow t = 0 \text{ or } 0$ $t = 0, y_{max} = 4110$	9
4) $(a-1)^r = H+1$ $r_{a+1} =$ $(a-1)^r = r_{a+1} \rightarrow$ $a^r + 1 + r_{a+1} < r_{a+1}$ $a^r - 0a = 0 \rightarrow \boxed{a < f}$ $\boxed{a < f, 0}$ 5) $a^r + q_{a+1} = a+1$ $a+1 =$ $a^r + r_{a+1} < a+1$ از مقدار نصف من برسیم 1- مقدار $a^r + r_{a+1} < a+1 \rightarrow a^r + a - r_{a+1} \rightarrow a < -r_{a+1}$ $a^r + r_{a+1} < -a - r_{a+1} \rightarrow a^r + r_{a+1} + r_{a+1} < -a - r_{a+1} - 1$ $\boxed{a < -r_{a+1}}$	10