

$$1) x^2 - 4x + 9 = 1 \quad (x - 3)^2 = +1 \quad x - 3 = \pm 1 \quad \begin{matrix} \rightarrow x = 4 \\ \downarrow \\ x = 2 \end{matrix}$$

$$2) x^2 + 8x + 14 = 9 \quad (x + 4)^2 = 9 \quad x + 4 = \pm 3 \quad \begin{matrix} \rightarrow x = -1 \\ \searrow \\ x = -7 \end{matrix}$$

$$1) x^2 - 5x + 4 = 0 \quad (x - 4)(x - 1) = 0 \quad \begin{matrix} \rightarrow x = 4 \\ \downarrow \\ x = 1 \end{matrix}$$

$$2) x^2 - 5x - 14 = 0 \quad (x - 7)(x + 2) = 0 \quad \begin{matrix} \rightarrow x = 7 \\ \downarrow \\ x = -2 \end{matrix}$$

$$1) \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \quad \begin{matrix} + 3 \pm \sqrt{9 + 20} \\ \rightarrow \frac{+3 + \sqrt{29}}{2} \\ \searrow \\ \frac{+3 - \sqrt{29}}{2} \end{matrix}$$

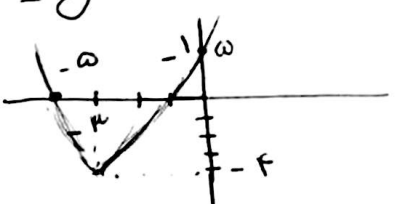
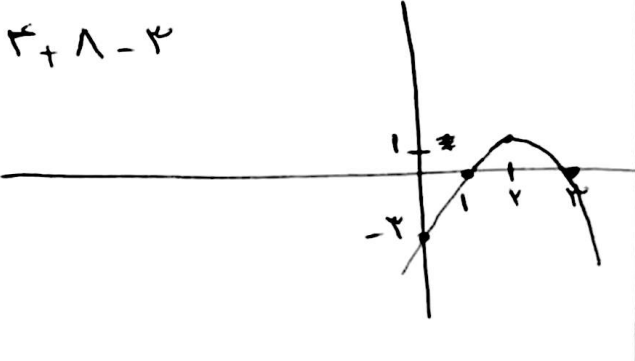
$$2) \frac{+5 \pm \sqrt{14 - 5}}{1} \rightarrow \begin{matrix} \frac{+5 - \sqrt{9}}{1} \\ \rightarrow \frac{+5 + \sqrt{9}}{1} \end{matrix}$$

$$1) (x - 1)(x - 2) \quad \begin{matrix} \rightarrow x = 2 \\ \downarrow \\ x = 1 \end{matrix}$$

$$2) \begin{matrix} 5x^2 + x - 2 = 0 & x^2 + x - 12 = 0 & (x - 3)(x + 4) = 0 \\ -\frac{c}{a}, -1 & x = \frac{3}{1} \quad x = -4 \\ & & \frac{3}{1} \quad \frac{-4}{1} \end{matrix}$$

$$1) 5x^2 - 12x + 7 = 0 \quad x^2 - 12x + 35 = 0 \quad (x - 7)(x - 5) = 0 \quad \begin{matrix} \frac{5}{5} = 1 \\ \frac{5}{5} = 1 \end{matrix}$$

$$2) x^2 - 10x + 21 = 0 \quad (x - 7)(x - 3) = 0 \quad \begin{matrix} \frac{7}{7} = 1 \\ \frac{3}{3} = 1 \end{matrix}$$

الف) $-2x^2 + \omega x - 1 = 0$ $\frac{-\omega \pm \sqrt{2\omega - 12}}{-4} \rightarrow \hat{x}_1, \hat{x}_2$ ب) $2x^2 - x + 2 = 0$ $\frac{+1 \pm \sqrt{1-16}}{4} \rightarrow \Delta \neq 0$ ج) $2x^2 - 4x + 2 = 0$ $\Delta < 0$ $\hat{x}_1, \hat{x}_2$ ندارد د) $2x^2 - x + 1 = 0$ $\frac{+1 \pm \sqrt{1-8}}{4} \rightarrow \Delta < 0$ $\hat{x}_1, \hat{x}_2$ ندارد	۶
الف) $2x^2 - 3x + \alpha = 0$ $+3 \pm \sqrt{9-4\alpha}$ $9-4\alpha > 0$ $\alpha < \frac{9}{4}$ $\Delta > 0$ ب) $9-4\alpha = 0$ $\alpha = \frac{9}{4}$ ج) $9-4\alpha < 0$ $\alpha > \frac{9}{4}$ $\Delta < 0$ $9-4\alpha \geq 0$ $\alpha \leq \frac{9}{4}$	۷
الف) $y = x^2 + 4x + \omega$ $\frac{-b}{2a} = \frac{-4}{2} = -2$ $-f = y = 9 - 16 + \omega$ $(min) \leftarrow$ $\omega = 7$ ب) 	۸
الف) $y = -x^2 + 4x - 2$ $1 = y = -x^2 + 4x - 2$ جواب: $\frac{-b}{2a} = \frac{-4}{-2} = 2$ $-x^2 + 4x - 2 = 1$ $x = \frac{c}{a} = \frac{-2}{-1} = 2$ $x = 1$ 	
$x^2 - 3x - 2 = 0$ $3 = \frac{-b}{a} = \frac{+3}{1} = 3$ الف) $8^y - 2p = 0$ $9 + 3 = 12$ ب) $8^x - 3sp = 0$ $27 + 12 = 39$ $P = \frac{c}{a} = \frac{-2}{1} = -2$	۱۰