

$2m^2 - m + 1 = 0$ (ج) $\Delta = 1 - 4 = -3$ $\ominus \Rightarrow$ ریشه ندارد	$2m^2 - 4m + 2 = 0$ (ب) $\Delta = 14 - 14 = 0$ $\odot \Rightarrow$ ریشه یک نقطه دارد ریشه تار	$2m^2 - m + 2 = 0$ (ب) $\Delta = 1 - 14 = -13$ $\ominus \Rightarrow$ ریشه ندارد	$-3m^2 + dm - 1 = 0$ (الف) $\Delta = b^2 - 4ac$ $2d - 12 = 13$ $\oplus \Rightarrow$ ریشه دارد	6
$\Delta = 9 - (14a)$	$a > \frac{9}{14}$ (ج) دلتا بزرگتر از صفر ریشه دارد	$a = \frac{9}{14}$ (ب) دلتا برابر صفر ریشه دارد	$a < \frac{9}{14}$ (الف) دلتا کوچکتر از صفر ریشه ندارد	7
$-v$ (الف) $+v$ (ب) $\frac{9}{14}$ (ج) $-a$ (د)	$a \leq \frac{9}{14}$ (د) دلتا بزرگتر یا مساوی صفر ریشه دارد	$a > 0 \Rightarrow \min$ (الف) $x^2 + 4x + d = y$ $\frac{-b}{2a} = \frac{-4}{2} = -2$ $(-2)^2 + 4x - 2 + d = -4$ $\min \left \begin{matrix} -2 \\ -4 \end{matrix} \right.$		1
$-x^2 + 4x - 3 = 0$ (ب) $a + b + c = 0 \Rightarrow$ $n = 1$ $n = \frac{c}{a} = 3$ $ 1 , 3 $ ریشه نقطه	$y = -x^2 + 4x - 3$ (الف) $a < 0 \Rightarrow \max$ $\frac{-b}{2a} = \frac{-4}{-2} = 2$ $-x^2 + 4x - 3 = 1$ $\max \left \begin{matrix} 2 \\ 1 \end{matrix} \right.$			9
$S^3 - 3SP = \dots$ (ب) $3^3 - (3 \times 3 \times -2) =$ -18 $2V - (18) = (4d)$	$x^2 - 3x - 2 = 0$ (الف) $S = \frac{-b}{a} = 3$ $P = \frac{c}{a} = -2$ $S^2 - 2P = 3^2 - (2 \times -2) =$ $9 - (-4) = 13$			10

$$\begin{aligned} x^2 + 1x + 7 &= 0 \quad (ب) \\ x^2 + 1x + 14 - 7 &= 0 \\ (x+7)^2 - 4 &= 0 \Rightarrow \\ x &= -1 \\ x &= -7 \end{aligned}$$

$$\begin{aligned} x^2 - 4x + 1 &= 0 \quad (الف) \\ x^2 - 4x + 4 - 3 &= 0 \\ (x-2)^2 - 3 &= 0 \Rightarrow \\ x &= 2 \\ x &= 2 \end{aligned}$$

$$\begin{aligned} x^2 - 5x - 14 &= 0 \quad (ب) \\ (x-7)(x+2) &= 0 \\ x &= 7 \\ x &= -2 \end{aligned}$$

$$\begin{aligned} x^2 - 5x + 4 &= 0 \quad (الف) \\ (x-2)(x-3) &= 0 \\ x &= 2 \\ x &= 3 \end{aligned}$$

$$2x^2 - 4x + \frac{1}{2} = 0 \quad (ب)$$

$$\begin{aligned} x &= \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{4 \pm \sqrt{12}}{4} = \frac{4 \pm 2\sqrt{3}}{4} = \frac{2 \pm \sqrt{3}}{2} \\ x &= \frac{-b - \sqrt{\Delta}}{2a} = \frac{4 - \sqrt{12}}{4} = \frac{4 - 2\sqrt{3}}{4} = \frac{2 - \sqrt{3}}{2} \end{aligned}$$

$$\begin{aligned} x^2 - 3x - 6 &= 0 \quad (الف) \\ x &= \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{3 \pm \sqrt{29}}{2} \\ x &= \frac{-b - \sqrt{\Delta}}{2a} = \frac{3 - \sqrt{29}}{2} \end{aligned}$$

$$\begin{aligned} a+c &= b \\ 4-3 &= 1 \checkmark \Rightarrow \\ x &= -1 \\ x &= -\frac{c}{a} = \frac{3}{4} \end{aligned}$$

$$\begin{aligned} x^2 - 3x + 2 &= 0 \quad (الف) \\ (x-2)(x-1) &= 0 \\ x &= 2 \\ x &= 1 \end{aligned}$$

$$\begin{aligned} 2x^2 - 10x + 7 &= 0 \quad (ب) \\ x^2 - 5x + 3.5 &= 0 \\ (x-3.5)(x-1) &= 0 \\ x &= \frac{7}{2} \\ x &= \frac{7}{2} = 3.5 \end{aligned}$$

$$\begin{aligned} 5x^2 - 12x + 7 &= 0 \quad (الف) \\ x^2 - 12x + 3.5 &= 0 \\ (x-3.5)(x-1) &= 0 \\ x &= \frac{7}{2} \\ x &= \frac{7}{2} = 3.5 \end{aligned}$$