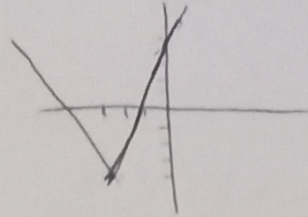
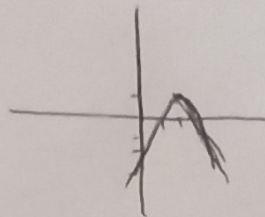


Min $\left| \begin{array}{l} \frac{-b}{2a} = \frac{-4}{2} = -2 \\ \frac{-\Delta}{2a} = \frac{-(16-12)}{2} = \frac{-4}{2} = -2 \end{array} \right.$



۱

Max $\left| \begin{array}{l} \frac{-b}{2a} = \frac{-4}{-2} = 2 \\ \frac{-\Delta}{2a} = \frac{-(16-12)}{-2} = \frac{-4}{-2} = 2 \end{array} \right.$



۲

$-m^2 + 4m - 3 = 0 \rightarrow -(m^2 - 4m + 3) = 0 \rightarrow -(m-1)(m-3) = 0$
 $\rightarrow (-m+1)(m-3) = 0 \rightarrow m < \frac{1}{3}$ این معنی همواره با دو نقطه ۱ و ۳ قطع می‌کند.

الف) $a < \frac{9}{\lambda} \rightarrow \Delta > 0 \quad \Delta = 9 - 4a$

ب) $a = \frac{9}{\lambda} \rightarrow \Delta = 0$

ج) $a > \frac{9}{\lambda} \rightarrow \Delta < 0$

د) $a \leq \frac{9}{\lambda} \rightarrow \Delta \geq 0$

۳

الف) $m^2 - 2m + 1 = 2 \rightarrow (m-1)^2 = 2 \rightarrow m-1 = \pm\sqrt{2} \rightarrow$

$m < \begin{cases} 1+\sqrt{2} \\ 1-\sqrt{2} \end{cases}$

$m < \begin{cases} \frac{1+\sqrt{5}}{2} \\ \frac{1-\sqrt{5}}{2} \end{cases}$

۴

ب) $m^2 - m + \frac{1}{\varepsilon} = \frac{5}{4} \rightarrow (m - \frac{1}{2})^2 = \frac{5}{4} \rightarrow m - \frac{1}{2} = \pm\frac{\sqrt{5}}{2} \rightarrow$

الف) $\Delta = 4 - (-4) = 8$

$m = \frac{2 \pm \sqrt{8}}{2}$

$m < \begin{cases} 1-\sqrt{2} \\ 1+\sqrt{2} \end{cases}$

۵

ب) $\Delta = 1 - (-16) = 17$

$m = \frac{-1 \pm \sqrt{17}}{2}$

$m < \begin{cases} \frac{-1+\sqrt{17}}{2} \\ \frac{-1-\sqrt{17}}{2} \end{cases}$

$$\text{الف) } (n-4)(n-7)$$

$$n \begin{cases} 4 \\ 7 \end{cases}$$

$$\text{ب) } (n-4)(n+7)$$

$$n \begin{cases} 4 \\ -7 \end{cases}$$

$$\text{الف) } n^2 - 12n + 35 = (n-7)(n-5)$$

$$n \begin{cases} \frac{7}{5} \\ \frac{5}{7} = 1 \end{cases}$$

$$\text{ب) } n^2 - 10n + 21 = (n-7)(n-3)$$

$$n \begin{cases} \frac{7}{3} \\ \frac{3}{7} \end{cases}$$

$$\text{الف) } n^2 - 5n + 4 = (n-4)(n-1) \rightarrow n = \textcircled{1} \frac{4}{1} = 4 \textcircled{2} \frac{1}{4}$$

$$\text{ب) } n^2 + 5n + 4 = (n+4)(n+1) \rightarrow n = \textcircled{1} -\frac{4}{1} = -4 \textcircled{2} -\frac{1}{4}$$

$$\text{ج) } \Delta = 25 - 16 = 9 \quad n = \frac{5 \pm \sqrt{9}}{4} \rightarrow n = \textcircled{1} \frac{5+3}{4} \textcircled{2} \frac{5-3}{4}$$

$$\text{د) } \Delta = 49 - 144 = -95 \quad \text{معادله جواب ندارد}$$

$$q = \frac{-b}{a} = \frac{3}{1} = 3 \quad p = \frac{c}{a} = \frac{-2}{1} = -2$$

$$\text{الف) } 9 - (-4) = 9 + 4 = 13$$

$$\text{ب) } 47 + 18 = 65$$

$$\text{الف) } \frac{4 \times 7}{2} + \frac{1 \times 9}{2} = 21 + 4.5 = 25.5$$

$$\text{ب) } \frac{7 \times 1 \times 9}{3 \times 2} - \frac{7 \times 1}{2} = 10.5 - 3.5 = 7$$