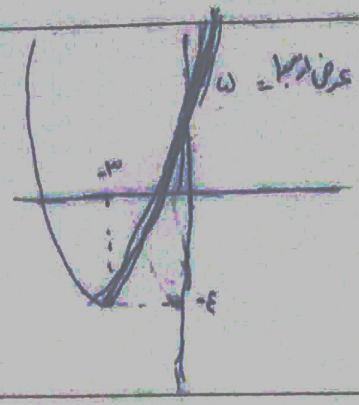


$$x + a > 0 \rightarrow \text{min} \begin{cases} x = \frac{-b}{2a} = \frac{-6}{2} = -3 \\ y = \frac{-\Delta}{4a} = \frac{-16}{4} = -4 \end{cases}$$

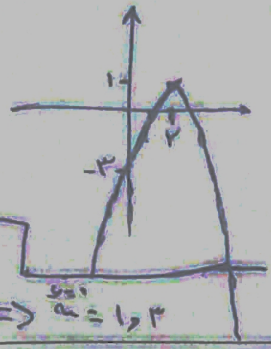
$\Delta = 36 - 20 = 16$

نوع الیتم: منبسط
 الف) $1 = \frac{4}{a} \rightarrow a = 4$



$$x + a > 0 \begin{cases} x = \frac{-b}{2a} = \frac{-6}{2} = -3 \\ y = \frac{-\Delta}{4a} = \frac{-16}{4} = -4 \end{cases}$$

$$y = -x^2 - 6x - 5 = -(x+3)^2 + 4$$



الف) $a > \frac{9}{\lambda}$ ب) $\frac{9}{\lambda} < a < 9$ ج) $9 > a > 0$ د) $\Delta > 0, b^2 - 4ac < 0$ هـ) $4a^2 - 2a + 9 > 0$

ب) $4a^2 - 2a + 9 > 0 \rightarrow \Delta < 0 \rightarrow b^2 - 4ac < 0 \rightarrow 4 - 4a < 0 \rightarrow 0 < a < 1$

ج) $4a^2 - 2a + 9 > 0 \rightarrow \Delta < 0 \rightarrow b^2 - 4ac < 0 \rightarrow 4 - 4a < 0 \rightarrow a > 1$

د) $4a^2 - 2a + 9 > 0 \rightarrow \Delta > 0 \rightarrow b^2 - 4ac > 0 \rightarrow 4 - 4a > 0 \rightarrow a < 1$

الف) $a^2 - 2a - 1 = 0$
 $a^2 - 2a - 1 + 2 - 2 = 0$
 $a^2 - 2a + 1 = 2$
 $(a-1)^2 = 2$
 $a-1 = \pm\sqrt{2}$
 $a = \pm\sqrt{2} + 1$

ب) $a^2 - 2a - 1 = 0$
 $a^2 - 2a - 1 + \frac{\Delta}{4} - \frac{\Delta}{4} = 0$
 $a^2 - 2a + \frac{1}{4} = \frac{17}{4}$
 $(a - \frac{1}{2})^2 = \frac{17}{4}$
 $a = \frac{1 + \sqrt{17}}{2} + \frac{1}{2} = \frac{2 + \sqrt{17}}{2}$

الف) $a^2 - 2a - 1 = 0$
 $\Delta = b^2 - 4ac = 4 + 4 = 8$
 $a = \frac{2 \pm \sqrt{8}}{2} = \frac{2 \pm 2\sqrt{2}}{2} = 1 \pm \sqrt{2}$

ب) $a^2 + a - 6$
 $\Delta = 1 + 24 = 25$
 $a = \frac{-1 \pm \sqrt{25}}{2}$

الف) $x^2 - 11x + 28 = 0$
 $(x-7)(x-4) = 0$
 لعم لعم
 $x = 7, 4$

ب) $x^2 + 3x - 28 = 0$
 $= (x+7)(x-4) = 0$
 $x = -7, 4$

الف) $5x^2 - 12x + 7 = 0$
 $x^2 - 12x + 7 = 0$
 $(x-5)(x-0) = 0$
 $x = \frac{7}{5}, \frac{0}{5} = 0$
 $x = \frac{7}{5}, 0$

ب) $3x^2 - 10x + 7 = 0$
 $x^2 - 10x + 21 = 0$
 $(x-7)(x-3) = 0$
 $x = \frac{7}{3}, \frac{3}{3} = 1, \frac{0}{3}$

الف) $2x^2 - 5x + 3 = 0$
 $a+b+c = 1+0 = 1$
 $\rightarrow a=1, \frac{c}{a} = 1, \frac{b}{a} = \frac{3}{2}$
 ب) $2x^2 + 5x + 3 = 0$
 $a+c = b$
 $\rightarrow a=1, -\frac{c}{a} = -1, -\frac{b}{a} = -\frac{3}{2}$

ب) $2x^2 - 5x + 1 = 0$
 $\Delta = b^2 - 4ac = 25 - 4 = 21$
 $x = \frac{-b \pm \sqrt{\Delta}}{2a} = \frac{5 \pm \sqrt{21}}{4}$

ب) $2x^2 + 5x + 3 = 0$
 $\Delta = b^2 - 4ac = 25 - 12 = 13$
 $\rightarrow \Delta < 0 \rightarrow$ لا يوجد حقيقيات

الف) $2x - 2 = 0$
 $\frac{2x}{2} = \frac{2}{2} = 1$
 $\frac{-2}{2} = -1$

الف) $5x^2 - 2x = 3x = x(-x) = 9 + 8 = 17$
 ب) $5x^2 - 2x = 3x = x(-x)(3) = 2x + 18 = 84$

الف) $\begin{pmatrix} 0 \\ 0 \end{pmatrix} + \begin{pmatrix} 9 \\ 2 \end{pmatrix} = 11 + 18 = 29$
 $\begin{pmatrix} 0 \\ 0 \end{pmatrix} = \frac{0 \times 9}{2} = 0$
 $\begin{pmatrix} 9 \\ 2 \end{pmatrix} = \frac{9 \times 18}{2} = 81$

ب) $\begin{pmatrix} 9 \\ 2 \end{pmatrix} - \begin{pmatrix} 1 \\ 2 \end{pmatrix} = 8 - 2 = 6$
 $\begin{pmatrix} 9 \\ 2 \end{pmatrix} = \frac{9 \times 18}{2} = 81$
 $\begin{pmatrix} 1 \\ 2 \end{pmatrix} = \frac{1 \times 18}{2} = 9$