

الف) $x_s = \frac{-b}{2a} = \frac{+4}{2} = +1$ $\rightarrow \min$
 طابقتاری $\rightarrow y(1) - f(1) + 1 = -4 + 1 = -1$
 (19-1)

$x_s = \frac{-3}{2} = \frac{3}{2}$

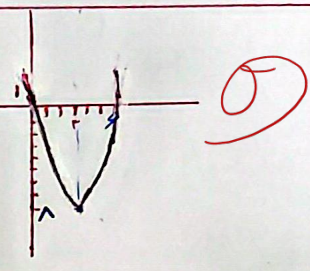
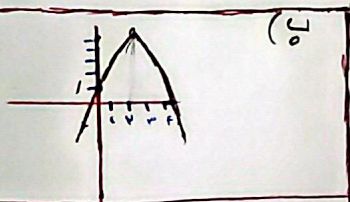
الف-1) $y = \frac{-1}{2a} = \frac{3}{-2}$
 $\Delta = 9 - 4 = -31$

1910

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$x_s = \frac{+4}{2} = 2$, $y = 9 - 18 + 1 = -8$ \rightarrow $x_s = +1$

$x_s = \frac{-4}{-2} = 2$, $y = \frac{-2}{-2} = -1$



الف-2

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3- معادله درجه 2 میسازیم که ریشه پیدا کنیم
 $x^2 - (a+b)x + ab = 0 \rightarrow x^2 - x - 2 = 0 \rightarrow (x-2)(x+1) = 0$
 $\rightarrow x = 2$ و $\beta = 2$ و $\alpha = -1$
 چون ریشه معادله درجه 2 جواب میدهد

$x = 2 \rightarrow f(1) + k(f) - g(2) - 2 = 0 \rightarrow 3 \cdot 2 + 4k - 18 - 2 = 0 \rightarrow 12 + 4k - 20 = 0 \rightarrow 4k = 8 \rightarrow k = 2$

$(\sqrt{a} - \sqrt{b})^2 = 1 \rightarrow +a - 2\sqrt{ab} + b = 1 \rightarrow +3 - 2\sqrt{3b} = 1 \rightarrow -2\sqrt{3b} = -2 \rightarrow \sqrt{3b} = 1 \rightarrow 3b = 1 \rightarrow b = \frac{1}{3}$
 $\frac{c}{a} = 1 = \frac{m}{1} = 1 \rightarrow 2x^2 - x - 1 = 0 \rightarrow \frac{p}{a} = \frac{c}{a} \rightarrow \frac{-1}{2} = -\frac{1}{2}$

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$2x^2 - (m+1)x + m = 0 \rightarrow a+b+c=0 \rightarrow x=1$ $\rightarrow \frac{m}{1} \rightarrow y(0) = m$
 $\rightarrow s = \frac{1}{2} |m(\frac{m}{2} - 1)| \Rightarrow |m(\frac{m}{2} - 1)| = \frac{3}{2} \rightarrow |m(m-2)| = 3$
 $\rightarrow m = -1 \rightarrow \frac{m}{2} = -\frac{1}{2}$
 $\rightarrow \frac{m}{2} = \frac{3}{2} \rightarrow m = 3$

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$x_s = -\frac{3}{2a} \Rightarrow a(-\frac{3}{2a})^2 + 3(-\frac{3}{2a}) + a = \frac{9}{4} \Rightarrow \frac{9}{4a} - \frac{9}{2a} + a = \frac{9}{4} \Rightarrow -\frac{9}{4a} + a = \frac{9}{4}$
 $\Rightarrow 4a^2 - 9a - 18 = 0 \Rightarrow \begin{cases} a = 3 \\ a = -\frac{3}{4} \end{cases}$
 $a = 3$ است $a > 0$ قابل قبول

1910-5

$x^2 - (a+1)x + a = 0 \rightarrow \begin{cases} x=1 \\ x=a \end{cases} \rightarrow a=3$
 $x^2 - 1 \cdot x + b = 0$
 $k + (k+2) = 10 \Rightarrow 2k = 8 \Rightarrow k = 4 \Rightarrow 4 \times 4 - 3 \times 1 = 13$

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$y = ax^2 + bx + c \Rightarrow S(\frac{1}{2}, \frac{4^2 + 16}{4})$
 $y = 2bx^2 - bx - 1 \Rightarrow S(\frac{1}{2}, \frac{b^2 + 16}{4})$
 $2b(\frac{1}{2}) - b(\frac{1}{2}) - 1 = \frac{b^2}{4} + 2 \Rightarrow \frac{b}{2} - \frac{b}{2} - 1 = \frac{b^2}{4} + 2 \Rightarrow \frac{b^2}{4} = -3 \Rightarrow b = -12$
 $\frac{-a}{16} + \frac{b}{4} + c = \frac{-b}{4} - 1 \Rightarrow \frac{16}{16} = \frac{-b}{4} \Rightarrow b = -4 \Rightarrow b - a = -4 - (-12) = 8$

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$$\alpha\beta = \frac{\beta}{r\alpha} \rightarrow \alpha^r = \frac{1}{r\alpha} \rightarrow \alpha = \pm \frac{1}{\sqrt[r]{r}}$$

د 9 - 9

$$r = \alpha : r\alpha \times \frac{1}{r\alpha} + r\alpha + \beta = 0 \rightarrow \alpha + \beta = 0 \Rightarrow \beta = -\alpha$$

$$\xrightarrow{\beta > \alpha} \begin{cases} \alpha = -\frac{1}{\alpha} \\ \beta = 1 \end{cases} \Rightarrow \beta > \alpha \text{ (شبهه د 9) } \rightarrow \text{معادله 9} = -\frac{b}{r} = \frac{-r}{-1} = \frac{r}{\alpha}$$

$$y = -\alpha \times \frac{r}{r\alpha} + \frac{1}{\alpha} + 1 = \frac{r}{\alpha} \text{ جواب د 9}$$

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$$x^r - (a^r + b^r - 1)x + (a+b-1) = 0$$

$$\Rightarrow S \Rightarrow a^r + b^r - 1x = a + b \quad \uparrow$$

$$\Rightarrow P \Rightarrow a + b - 1 = ab(r)$$

$$a^r + b^r = (a+b)^r - r\alpha b \Rightarrow (a+b)^r - r(a+b-1) - 1x = a+b$$

$$y^r - ry - (0 = 0) \Rightarrow (y - \alpha)(y + \alpha) = 0 \begin{cases} a+b = \alpha \\ a+b = -\alpha \end{cases}$$

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