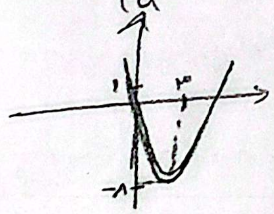
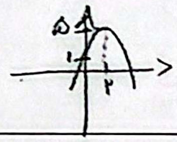
نام و نام خانوادگی ...نادیا اسلامی... پاسخنامه تشریحی تکلیف شماره ...۲۴... کلاس ...دهم دختر B...

۱	الف) min دارد $\frac{-b}{2a} = \frac{4}{4} = 1$ و $\frac{-\Delta}{4a} = \frac{-16+4\times2\times1}{4\times2} = \frac{-8}{8} = -1$ ب) max دارد $\frac{-b}{2a} = \frac{3}{4}$ و $\frac{-\Delta}{4a} = \frac{-9+4\times\cancel{-5\times-2}^{-10}}{4\times-2} = \frac{31}{8}$
۲	الف) $\frac{-b}{2a} = \frac{6}{2} = 3$ $\quad \frac{-\Delta}{4a} = \frac{-36+4}{4} = \frac{-32}{4} = -8$ min دارد  ب) $\frac{-b}{2a} = \frac{-4}{-2} = 2$ $\quad \frac{-\Delta}{4a} = \frac{-16-4}{-4} = 5$ max دارد 
۳	$\alpha+\beta+\theta = -\frac{b}{a} = -\frac{k}{4}$ $\quad \alpha\beta+\beta\theta+\theta\alpha = \frac{c}{a} = -\frac{9}{4}$ $\alpha\times\beta\times\theta = \frac{1}{2}$ $\quad \alpha\beta = -2$ $\quad -2\times\theta = \frac{1}{2}$ $\quad \theta = -\frac{1}{4}$ $\alpha+\beta-\frac{1}{4} = -\frac{k}{4}$ و $\alpha\beta+\theta(\alpha+\beta) = -\frac{9}{4}$ ⟶ $\alpha\times\beta = -2$ و $\theta = -\frac{1}{4}$ نتیجه $\frac{3}{4} = -\frac{k}{4}$ ⟶ $\boxed{k=-3}$ $\quad \alpha+\beta = 1$
۴	$\lvert\sqrt{x_1}-\sqrt{x_2}\rvert = 1$ $\quad (\sqrt{x_1}-\sqrt{x_2})^2 = 1$ $\quad x_1+x_2 = 3m$, $x_1\times x_2 = m$ $\underbrace{x_1+x_2}_{3m} - 2\underbrace{\sqrt{x_1x_2}}_{m} = 1$ ⟶ $3m-2\sqrt{m} = 1$ $\quad \sqrt{m} = t \Rightarrow 3t^2-2t-1 = 0$ $t^2-2t-3 = 0$ $(3t+1)(t-1) = 0$ ⟶ $-\frac{1}{3}$ ، 1 ✓ $\quad t = \sqrt{m}$ $\quad \sqrt{m} \geq 0$ ⟶ فقط 1 قبول ⟶ $m = 1$ $\quad -\frac{1}{2}$ $2x^2-x-1 = 0$ $\quad x^2-x-2 = 0$ $\quad \cancel{(x-2)(x+1)}$ 1 ⟵ $(x-1)(2x+1)$
۵	$(x_2,0)$ و $(x_1,0)$ $\quad \lvert x_1-x_2\rvert$ ⟶ قاعده $\quad \lvert m\rvert$ = ارتفاع $\quad m = c$ $\frac{1}{2}\times\lvert x_1-x_2\rvert\times\lvert m\rvert = \frac{\lvert m-2\rvert\lvert m\rvert}{4} = \frac{3}{4}$ ⟶ $\lvert m-2\rvert\times\lvert m\rvert = 3$ $\quad m^2-2m-3 = 0$ ⟶ $(m-3)$ و $(m+1)$ ⟶ 3 ، -1 $m(m-2) = -3$ ⟶ ✗ $\quad S = \frac{-b}{a}$ ⟶ $\frac{m}{1}$ ⟶ منفی ⟶ -1 یا 3 ✓ $(m+2)^2-8m = m^2-4m+4 = (m-2)^2$ $\quad \lvert x_1-x_2\rvert = \frac{\sqrt{\Delta}}{a} = \frac{\lvert m-2\rvert}{2}$ در نتیجه $m = 3$

$x = \frac{-3}{2a}$ $a > 0$ ⇐ کمترین مقدار

$y_{min} = a - \frac{9}{4a} = \frac{7}{8}$ $8a^2 - 7a - 18 = 0$ $\Delta = 49 + 576 = 625$ 6

$\frac{7 \pm 25}{16} \longrightarrow 2$ ✓ یا $-\frac{9}{8}$ ✗ $a > 0 \longrightarrow a = 2$

$n , n+2$ $n + (n+2) \longrightarrow a = 2n+1$ معادله اول

$n(n+2) = a \longrightarrow n(n+2) = 2n+1 \longrightarrow n^2 + 2n = 2n+1 \rightsquigarrow n^2 - 1 = 0$

$n = \pm 1$

$n = 1 \rightsquigarrow a = 3$

$n = -1 \rightsquigarrow a = -1$ 7

$x , x+2$ $x(x+2) = 3a + b \rightsquigarrow 2m + 2 = 10 \longrightarrow \boxed{m = 4}$ و $\boxed{b = 24}$ معادله دوم

$x(x+2) = b$

$2m + 2 = -2 \longrightarrow \boxed{m = -2}$ $\boxed{b = 0}$

$a - b = \longrightarrow -21$ یا -1

$x = \frac{-b}{2a} = -\frac{a}{-a \times 2} = \frac{a}{2a} = \boxed{\frac{1}{2}}$ $y = -a(\frac{1}{2})^2 + a(\frac{1}{2}) + 2$ سهمی اول

$\frac{-a}{4} + \frac{a}{2} + 2 = \boxed{\frac{a}{4} + 2}$ جواب: $b - a = \boxed{6}$

$x = \frac{-b}{2a} = \frac{b}{4b} = \boxed{\frac{1}{4}}$ سهمی دوم

$\frac{a}{4} + 2 = 2b(\frac{1}{4})^2 - \frac{b}{4} - 1 = \frac{b}{8} - \frac{b}{4} - 1 = \boxed{-1}$

$y = 2b\frac{1}{16} - \frac{b}{4} - 1 = \frac{b}{8} - \frac{2b}{8} - 1$

$\frac{a}{4} + 2 = -1$ $\frac{a}{4} = -3$ $\boxed{a = -12}$

$\boxed{\frac{-b}{8} - 1}$ $\frac{-b}{8} - 1 = \frac{-1}{4}$ $\frac{-b}{8} = \frac{3}{4}$ $\boxed{b = -6}$ $\frac{-b}{8} = 1 = 12 \times \frac{1}{16} + (-12) \times \frac{1}{4} + 2 \longrightarrow \frac{12}{16} - 1 = \boxed{\frac{-1}{4}}$

$\alpha + \beta = \frac{-b}{a} = \frac{-4}{25a}$ $\alpha \times \beta = \frac{c}{a} = \frac{\beta}{25a}$ $\Delta = 25a$

$x = \frac{-4}{50a} \rightsquigarrow \frac{-2}{25a}$ $y = \frac{-b^2 + 4ac}{4a} = \frac{-16}{100} + \beta$ 9

$a > 0 \longrightarrow y > 0$ یا $x < \alpha$ و $x > \beta$ اگر $a > 0$ $y < 0$

$a < 0$, $\alpha < x < \beta$ و $y > 0$ اگر $a < 0$ $y > 0$

$\Delta \geq 0$ $(a^2 + b^2 - 12)^2 - 4(a + b - 1) \geq 0$

$a = 1$ $b = 1$ $a + b = 2$ $\Delta = 96 \geq 0$ $a = 3 , b = 3$ $a + b = 6 , \Delta = 16$

$a = 2$, $b = 1$ $a + b = 3$ $\Delta = 41 \geq 0$ 10

$a = 1$, $b = 2$ $a + b = 3$ $\Delta = 41 \geq 0$

$a = 2$, $b = 2$ $a + b = 4$, $\Delta = 4$