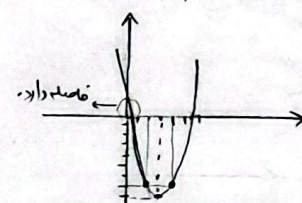
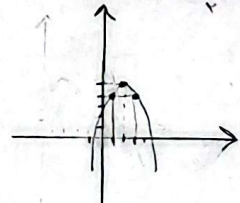


نام و نام خانوادگی: کلاس: شماره: پاسخنامه تشریحی تکلیف شماره ۲۰۰۰ (همین جدول رو بنویس)

<p>الف) $y = 2x^2 - 4x + 1$</p> <p>راس $x = \frac{-b}{2a} = \frac{4}{4} = 1$ ext $\left \begin{matrix} 1 \\ -1 \end{matrix} \right.$</p> <p>راس $y = 2 - 4 + 1 = -1$ $a > 0$</p> <p style="text-align: center;">min</p>	<p>ب) $y = -x^2 + 3x - 5$</p> <p>راس $x = \frac{-b}{2a} = \frac{-3}{-2} = \frac{3}{2}$ ext $\left \begin{matrix} \frac{3}{2} \\ -\frac{11}{4} \end{matrix} \right.$</p> <p>راس $y = -2 \times \frac{9}{4} + 3 \times \frac{3}{2} - 5 = -\frac{9}{2} + \frac{9}{2} - 5 = -5$ $a < 0$</p> <p>Max $-\frac{9}{2} + \frac{9}{2} - 5 = -5$ $\frac{-3}{2}$</p>
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<p>الف) $y = x^2 - 9x + 1$ $\frac{-b}{2a} = \frac{9}{2} = 4.5$ $9 - 18 + 1 = -8$</p> <p>$\Delta = b^2 - 4ac = 81 - 4 = 77$ $\sqrt{77} = 8.77$</p> <p>$\frac{9 \pm 8.77}{2} \rightarrow 8.88, 0.12$</p> 	<p>ب) $y = -x^2 + 7x + 1$ $\frac{-b}{2a} = \frac{-7}{-2} = 3.5$ $-4 + 24.5 + 1 = 21.5$</p> <p>$\Delta = b^2 - 4ac = 49 + 4 = 53$ $\sqrt{53} = 7.28$</p> <p>$\frac{7 \pm 7.28}{2} \rightarrow 7.14, -0.14$</p> 
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$S = a + b = 1 \rightarrow x^2 - 5x + 4 = 0$
 $P = ab = -2 \rightarrow x^2 - 2x - 2 = 0$

$Kx^2 + Kx - 9x - 4 = x^2 - 2x - 4$
 $Kx^2 + (K-1)x - 4 = 0 \rightarrow Kx^2 + (K-1)x - 4 = x^2 - 2x - 4$

$K+2 = -1 \rightarrow K = -3 \rightarrow x^2 - 2x - 2 = x^2 + (-3+1)x - 4$

$Kx^2 + Kx - 4 = 0$
 $Kx^2 + Kx - 4 = x^2 - 2x - 4$
 $Kx^2 + (K+1)x - 4 = 0$
 $Kx^2 + (K+1)x - 4 = x^2 - 2x - 4$
 $\rightarrow x^2 + (K+2)x - 2 = 0$

$\alpha - \beta = \frac{\sqrt{a}}{|a|}$ $x^2 - 13x + m \rightarrow \alpha\beta = m$
 $\alpha + \beta = 13m$

$(\sqrt{a} - \sqrt{b})^2 = 1 \rightarrow \alpha + \beta - 2\sqrt{\alpha\beta} = 1$
 $13m - 2\sqrt{m} = 1 \xrightarrow{\sqrt{m}=t} 13t^2 - 2t - 1 = 0 \rightarrow t^2 - 2t - 3 = 0 \rightarrow (t-3)(t+1)$
 $t = \frac{2 \pm \sqrt{4+12}}{2} = \frac{2 \pm 4}{2} \rightarrow t = 3 \text{ or } -1$

$\sqrt{m} = 1 \rightarrow m = 1$
 $13x^2 - mx - m \rightarrow 13x^2 - x - 1 = 0 \rightarrow \frac{c}{a} = \frac{-1}{13}$

$y = 2x^2 - (m+2)x + m$

$a+b+c=0 \rightarrow x=1, x = \frac{m}{2}$

$\frac{m \times (\frac{m}{2} - 1)}{2} = \frac{m \times (m-2)}{4} = \frac{m^2 - 2m}{4} = \frac{m}{4}$

$m^2 - 2m = 4 \rightarrow m^2 - 2m - 4 = 0 \rightarrow (m-2)(m+2) = 0$
 $\sqrt{m=4} \quad \sqrt{m=-2}$

$y = x^2 - mx + 1 \rightarrow x^2 - 4x + 1 \rightarrow \frac{-b}{2a} = \frac{4}{2} = 2$
 $\rightarrow x^2 + x + 1 \rightarrow \frac{-b}{2a} = \frac{-1}{2}$

$$y = ax^p + px + a$$

$$\frac{-\Delta}{fa} = \frac{-b^p + pa^q}{fa} = \frac{V}{\lambda} \rightarrow \frac{-9 + pa^p}{fa} = \frac{V}{\lambda} \rightarrow \lambda(-9 + pa^p) = pa$$

$$a > 0$$

$$\begin{aligned} -9\lambda + pa^p &= pa \\ pa^p - pa - 9\lambda &= 0 \\ pa^p - pa - 9\lambda &= 0 \end{aligned}$$

$$\Delta = b^p - fac = pa + 9\lambda = 9\lambda$$

$$x = \frac{-b \pm \sqrt{\Delta}}{pa} = \frac{V \pm pa}{14} = \left[\frac{1}{14} \right]$$



6

$$x^p - (a+1)x + a = 0 \rightarrow \frac{c}{a} = \frac{a}{1} = [p]$$

$$a - B = p \rightarrow \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{(a+1)^p - fa}}{1} = \sqrt{a^p + 1 + pa - fa} = \sqrt{a^p - pa + 1} = \sqrt{(a-1)^p} = |a-1|$$

$$x^p - (p+1)x + b = 0$$

$$|a-1| = p+1 \rightarrow a-1 = p \rightarrow a-1 = p$$

$$x^p - 10x + b = 0$$

$$a - B = p \rightarrow \frac{\sqrt{\Delta}}{|a|} = \frac{\sqrt{100 - fb}}{1} = p \rightarrow \sqrt{100 - fb} = \sqrt{p} \rightarrow 100 - fb = p$$

$$\frac{c}{a} = \frac{b}{1} = [p]$$

$$p - p = [p]$$



7

$$y = -ax^p + ax + p \rightarrow y = 11x^p - 11x + p$$

$$x = \frac{-b}{pa} = \frac{-a}{-1a} = \frac{1}{p}$$

$$y = -a \times \frac{1}{p} + \frac{1}{p} a + p = \frac{-a + a + p}{p} = \frac{a+p}{p}$$

$$y = pbx^p - bx - 1$$

$$x = \frac{-b}{pa} = \frac{-b}{pb} = \frac{1}{p}$$

$$y = pb \times \frac{1}{p} - \frac{1}{p} b - 1 = \frac{b - pb - 1}{p} = \frac{-b - 1}{p}$$

$$\frac{-b-1}{p} = 11 \times \frac{1}{14} - \frac{11}{14} + p^{-1}$$

$$\frac{-b-1}{p} = \frac{11}{14} - \frac{11}{14} \rightarrow \frac{-b-1}{p} = \frac{-1}{14} \rightarrow -p(-b-1) = \lambda$$

$$\frac{a+p}{p} = pb \times \frac{1}{p} - b \times \frac{1}{p} - 1 + \frac{a+p}{p} = \frac{-1}{p} \rightarrow \frac{a+p}{p} = \frac{-1}{p}$$

$$b - a = -4 + 11 = [9]$$



9

$$y = \alpha x^p + px + \beta$$

$$\frac{c}{a} = \frac{\beta}{pa} = \alpha \beta \rightarrow pa\alpha^p = 1 \rightarrow \alpha = \pm \frac{1}{a}$$

$$\frac{-b}{a} = \frac{-f}{pa} = \alpha + \beta \rightarrow \alpha = \frac{1}{a} \rightarrow \frac{-f}{a} \rightarrow \beta = \frac{-a}{a} = -1$$

$$-\alpha x^p + px + 1$$

$$u(x) = \frac{b}{pa} = \frac{-f}{10} = \frac{f}{10} = 9f \quad u(y) = -\alpha \times \frac{14}{100} + f \times \frac{f}{10} + 1 = \frac{-10 + 149 + 100}{100} = \frac{149}{100} = 1.49$$



10

$$a+b = \frac{-b}{a} = a^p + b^p - 11$$

$$ab = a + b - 1$$

$$ab = a^p + b^p - 11$$

$$ab = (a+b)^p - kab - 11$$

$$(a+b)^p - kab - 11 = 0$$

$$(a+b)^p - p(a+b-1) - 11 = 0$$

$$a+b = t \rightarrow t^p - p(t-1) - 11 = 0 \rightarrow t^p - pt + p - 11 = 0 \rightarrow t^p - pt - 10 = 0$$

$$(t-10)(t+1) = 0$$

$$t = \frac{-p \pm \sqrt{p^2 + 40}}{2} \rightarrow t = \frac{-10 \pm \sqrt{100 + 40}}{2}$$

