نام و نام خانوادگی ...پریا جان عاملی............ پاسخنامه تشریحی تکلیف شماره ...۱... کلاس ...دهم "ب"...

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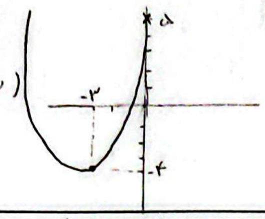
$y=x^2+6x+5$

$-3^2+6\times-3+5=9+5-18=-4$

الف) $1>0 \to \cup$ min ext $\left| \frac{-6}{2\times1}=-3 \quad \frac{-b}{2a} \right.$, -4

ب)



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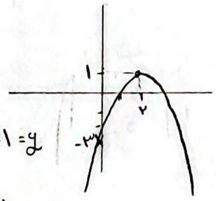
$y=-x^2+4x-3$

الف) ext $\left| \frac{-b}{2a}=\frac{-4}{-2}=2 \right.$

$-1<0 \to \cap$ max $\left| \frac{-\Delta}{4a} \Rightarrow \Delta=b^2-4ac \right.$

$\Delta=16-(4\times-3\times-1)=4 \qquad \frac{-4}{-4}=1=y$



ب) $y=0 \quad x^2-4x+3=0 \quad (x-3)(x-1)=0$

$x=1$ or $x=3$

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$2x^2-3x+a=0$

الف) $\Delta=b^2-4ac$ if $\Delta>0 \Rightarrow 9-8a>0 \quad 9>8a \quad a<\frac{9}{8}$

ب) if $\Delta=0 \Rightarrow 9-8a=0 \quad a=\frac{9}{8}=1.125$

ج) if $\Delta<0 \Rightarrow 9-8a<0 \Rightarrow 9<8a \Rightarrow a>\frac{9}{8}$

د) if $\Delta\geq0 \quad 9-8a\geq0 \quad a\leq\frac{9}{8}$

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الف) $x^2-2x-1=0 \quad x^2-2x=1 \Rightarrow x^2-2x+1=2$

$(x-1)^2=\pm\sqrt{2}$

$x=1\pm\sqrt{2}$

ب) $x^2-x-1=0 \quad x^2-x=1$

$x^2-x+\frac{1}{4}=1+\frac{1}{4}$

$(x-\frac{1}{2})^2=\frac{5}{4}$

$\Rightarrow x-\frac{1}{2}=\pm\sqrt{\frac{5}{4}}=\pm\frac{\sqrt{5}}{2}$

$x=\frac{1\pm\sqrt{5}}{2}$

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الف) $x^2-2x-1=0$

$\Delta=b^2-4ac=-2^2-(4\times1\times(-1))=4+4=8 \qquad x=\frac{-b\pm\sqrt{\Delta}}{2a} \quad x=\frac{+2\pm2\sqrt{2}}{2} \Rightarrow x=1\pm\sqrt{2}$

ب) $x^2+x-4=0$

$\Delta=b^2-4ac=1-(4\times-4\times1)=1+16=17 \qquad x=\frac{-b\pm\sqrt{\Delta}}{2a} \Rightarrow x=\frac{-1\pm\sqrt{17}}{2}$

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الف) $x^2 - 11x + 28 = 0$

$(x-4)(x-7) = 0$

$x = 4, 7$

ب) $x^2 + 3x - 28 = 0$

$(x+7)(x-4) = 0$

$x = -7, +4$

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الف) $6x^2 - 13x + 7 = 0$

$(x-1)(6x-7) = 0$ $\quad a = \frac{7}{6}$ or $a = \frac{6}{6} = 1$

ب) $3x^2 - 10x + 7 = 0$

$(x-3)(x-7) = 0$ $\quad a = \frac{3}{3} = 1$ or $a = \frac{7}{3}$

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$2x^2 - 5x + 3 = 0$ $\quad a+b+c = 0$ $\quad x = 1$ or $\frac{3}{2}$

$2x^2 + 5x + 3 = 0$ $\quad a+c = b$ $\quad x = -1$ or $-\frac{3}{2}$

$2x^2 - 5x + 1 = 0$ $\quad \Delta = (-5)^2 - (4\times2\times1) = 25 - 8 = 17$ $\quad x = \frac{+5 \pm \sqrt{17}}{4}$

$4x^2 + 12x + 9 = 0$ $\quad \Delta = 12^2 - 144 = 0$ $\quad \Delta < 0$ $\quad 9 > 0$ $\quad a = 4$ معادله ریشه ندارد

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$x^2 - 3x - 2 = 0$ $\quad p = \frac{c}{a} = \frac{-2}{1} = -2$ $\quad s = \frac{-b}{a} = \frac{3}{1} = 3$

الف) $s^2 - 2p = 9 - (-4) = 13$

ب) $s^3 - 3sp = 27 + 18 = 45$

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الف) $\binom{5}{1} + \binom{9}{2} = \frac{5!}{4!} + \frac{9!}{7!2!} = (5\times1) + (9\times4) = 5 + 36 = 41$

ب) $\binom{9}{3} - \binom{7}{2} = \frac{9!}{6!3!} - \frac{7!}{5!2!} = (7\times4\times3) - (7\times3) = 84 - 21 = 63$