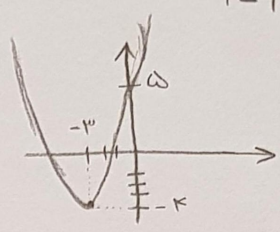
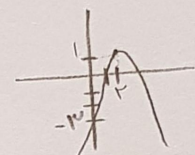


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$y = x^2 + 4x + 5$ $\frac{-b}{2a} = \frac{-4}{2} = -2$ $y_{min} = y = (-2)^2 + 4(-2) + 5 = -1$	الف) $\begin{cases} -2 \\ -1 \end{cases}$ و $a > 0$ Min ب) 
$y = -x^2 + 4x - 3$ $\frac{-b}{2a} = \frac{-4}{-2} = 2$ $y = -(2)^2 + 4(2) - 3$ $y = -4 + 8 - 3 = 1$	الف) $\begin{cases} 2 \\ 1 \end{cases}$ و $a < 0 \rightarrow \text{Max}$ ب)  $a+b+c=0$ $-1+4-3=0$ $x=1$ $x=\frac{c}{a}=\frac{-3}{-1}=3$
$9 - 1a < 0$ $9 < 1a$ $\boxed{\frac{9}{1} < a}$ $2x^2 - 3x = -a$ $\boxed{a < \frac{9}{1}}$	الف) دلتا $\leftarrow$ مثبت $(-3)^2 - 4a(2) =$ ب) دلتا $\leftarrow$ منفی ج) دلتا $\leftarrow$ صفر $9 - 1a > 0$ $9 > 1a \Rightarrow \boxed{\frac{9}{1} > a}$ $9 - 1a = 0$ $9 = 1a \Rightarrow \boxed{a = \frac{9}{1}}$
$x^2 - x - 1 = 0$ $x^2 - x - 1 + \frac{1}{4} = \frac{1}{4}$ $x^2 - x + \frac{1}{4} = \frac{5}{4}$ $\left(x - \frac{1}{2}\right)^2 = \frac{5}{4}$ $x - \frac{1}{2} = \pm \frac{\sqrt{5}}{2}$ $x = \frac{\sqrt{5}+1}{2}$ $x = \frac{-\sqrt{5}+1}{2}$	الف) $x^2 - 2x - 1 = 0$ $x^2 - 2x - 1 + 1 = 1$ $x^2 - 2x + 1 = 2$ $(x-1)^2 = 2$ $x-1 = \pm\sqrt{2}$ $x-1 = \sqrt{2} \Rightarrow \boxed{x = \sqrt{2}+1}$ $x-1 = -\sqrt{2} \Rightarrow \boxed{x = -\sqrt{2}+1}$
$x^2 + x - 4 = 0$ $\Delta = b^2 - 4ac = (1)^2 - 4(1)(-4) = 17$ $x = \frac{-b \pm \sqrt{\Delta}}{2a} \rightarrow \frac{-1 \pm \sqrt{17}}{2}$ $x = \frac{-1 \pm \sqrt{17}}{2} \rightarrow \frac{-1 - \sqrt{17}}{2}$	الف) $x^2 - 2x - 1 = 0$ $\Delta = b^2 - 4ac = (-2)^2 - 4(1)(-1) = 8$ $x = \frac{-b \pm \sqrt{\Delta}}{2a} \rightarrow x = \frac{2 \pm \sqrt{8}}{2} = \boxed{1 \pm \sqrt{2}}$ $x = \frac{2 \pm \sqrt{8}}{2} \rightarrow x = \frac{2 - \sqrt{8}}{2} = \boxed{1 - \sqrt{2}}$

$(x+V)(x-F)=0$ (ب) $x=F$ $x=-V$	$(n-V)(n-F)=0$ (الف) $n=F$ $n=V$	٢
$3x^2-10x+V=0$ (ب) $x^2-10x+21=0$ $(x-3)(x-7)=0$ $x=\frac{V}{3}$ $x=\frac{10}{3}=1$	$5x^2-12x+V=0$ (الف) $x^2-12x+35=0$ $(x-5)(x-7)=0$ $x=\frac{V}{5}$ $x=\frac{5}{5}=1$	٣
$2x^2+5x+3=0$ (ب) $a+c=b$ $2+3=5$ $x=-1$ $x=\frac{-c}{a}=\frac{-3}{2}$	$x^2-5x+4=0$ (الف) $(x-2)(x-3)=0$ $x=\frac{5}{2}=1$ $x=\frac{4}{2}=2$	١
$4x^2+Vx+9=0$ (ج) $\Delta=b^2-4ac=-95$ $\Delta=b^2-4ac=49-144=-95$ دلتا منفی است ← معادله جوابی (درجه دوم) ندارد.	$2x^2-5x+1=0$ (ج) $\Delta=b^2-4ac=17$ $\Delta=(-5)^2-4(1)(2)=25-8=17$ $x=\frac{-b\pm\sqrt{\Delta}}{2a}$ $x=\frac{5+\sqrt{17}}{4}$ $x=\frac{5-\sqrt{17}}{4}$	٢
$S=3 \quad P=-2$ (ب) $(3)^3-3(3)(-2)=27+18=45$	$S=\frac{-b}{a}=\frac{3}{1}=3$ (الف) $P=\frac{c}{a}=\frac{-2}{1}=-2$ $(3)^3-2(-2)=9+4=13$	٢
$\binom{9}{3}-\binom{1}{2}=12-1=11$ (ب) $\frac{3 \times 4 \times 5}{1 \times 2 \times 1}=12$ $\frac{1 \times 2}{1 \times 1}=2$	$\binom{V}{5}+\binom{9}{2}=21+36=57$ (الف) $\frac{V \times 4 \times 3 \times 2 \times 1}{5 \times 4 \times 3 \times 2 \times 1}=21$ $\frac{9 \times 8}{1 \times 1}=36$	٥