Date: ۳۹۰

عکسی سبزعلی

Subject:

الف) $y=2x^2-4x+1$ $\quad x=\frac{-b}{2a}=\frac{4}{4}=\boxed{1}$ $\quad y=\cancel{2-4+1}\ -1$ min (1)

ب) $-2x^2+3x-5 \to \frac{-3}{-4}=\frac{3}{4}$ max (4)

$-2\left(\frac{3}{4}\right)^2+3\left(\frac{3}{4}\right)-5=$

$-2\left(\frac{9}{16}\right)+3\left(\frac{3}{4}\right)-5=0$

$-\frac{9}{8}+\frac{9\times 2}{4\times 2}-\frac{5\times 8}{1\times 8}=-\frac{9}{8}+\frac{18}{8}-\frac{40}{8}=-\frac{49}{8}+\frac{18}{8}=\boxed{-\frac{31}{8}}\ y$

$y=x^2-6x+1$

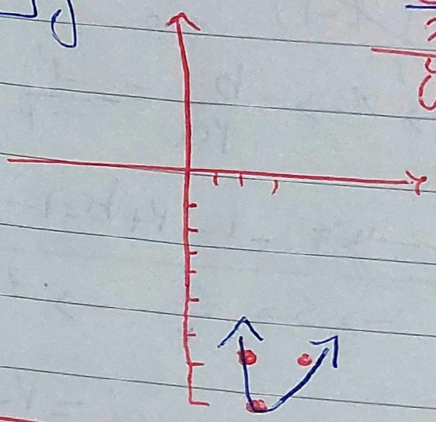
$\frac{6}{2}=\boxed{3}\to x$

$9-18+1=\boxed{-8}\ y$

$4-12+1$

min (2)

| $x$ | 2 | 3 | 4 |
|---|---|---|---|
| $y$ | $-7$ | $-8$ | $-7$ |



$y=-x^2+4x+1$

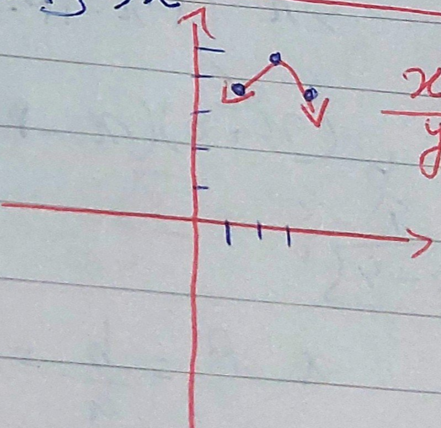
$\frac{-4}{-2}=\boxed{2}\to x$

$-4+8+1=\boxed{5}\ y$

$-1+4+1=\boxed{4}$

max

| $x$ | 1 | 2 | 3 |
|---|---|---|---|
| $y$ | 4 | 5 | 4 |



$y=\cancel{ax^2}+2x+a \to \cancel{\frac{-3}{2a}}$ $\quad x^2-(a+1)x+a=0$ (7)

$n\ ,\ n+2$ (فرض $n$) $\quad n+(n+2)=2n+2=a+1 \to a=2n+1$

$n(n+2)=a$ $\quad n(n+2)=2n+1$ $\quad a=2(1)+1=3$ $\quad a=3$

نتیجه $a=3$ $\quad x^2-10x+b=0$ $\quad$ جایگذاری $\quad b=4\times 6=24$

۴و۶ فرضی $\quad 24-3=\boxed{21}$

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$$\frac{-b}{2a} = \frac{-3}{2a} \to y = a - \frac{9}{4a} \to a - \frac{9}{4a} = \frac{7}{8}$$

$$8a^2 - 18 = 7a \quad 8a^2 - 7a - 18 = 0 \quad (8a+9)(a-2) = 0$$

$\boxed{a=2}$ یا $a = -\frac{9}{8}$

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$$x_1 = 1 \text{ , } x_2 = \frac{m}{2} \Rightarrow S = \frac{1}{2}|m|\left|1-\frac{m}{2}\right| = \frac{3}{4} = |m(2-m)| = 3$$

$m=-1$ یا $m=3$ $\quad y = x^2 - mx + 1 \quad y = 1 - \frac{m^2}{4}$

$m=3 \quad \boxed{y = -\frac{5}{4}} \quad m=-1 \to \boxed{y = \frac{3}{4}}$

$-\frac{5}{4}$ یا $\frac{3}{4}$

4

$$x^2 - 3mx + m = 0 \to x_1 + x_2 = 3m \qquad m = \frac{4 \pm \sqrt{16+36}}{18}$$

$$x_1 x_2 = m \qquad \frac{4 \pm \sqrt{52}}{18} = \frac{4 \pm 2\sqrt{13}}{18}$$

$$|x_1 - x_2| = \sqrt{(x_1+x_2)^2 - 4x_1x_2} = \sqrt{9m^2 - 4m} \qquad \frac{2 \pm \sqrt{13}}{9}$$

$$\sqrt{9m^2 - 4m} = 1 \quad 9m^2 - 4m = 1 \to 9m^2 - 4m - 1 = 0$$

$$2x^2 - mx - m = 0 \quad x_1x_2 = \frac{c}{a} = \frac{-m}{2} = -\frac{m}{2}$$

$$x_1x_2 = \frac{-m}{2} = -\frac{1}{2} \times \frac{2 \pm \sqrt{13}}{9} = -\frac{1 \pm \frac{\sqrt{13}}{2}}{9} = \boxed{-\frac{2 \mp \sqrt{13}}{18}}$$

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$y=-ax^2+bx+2 \quad x=\frac{-b}{2a}=\frac{-a}{2(-a)}=\boxed{\frac{1}{2}}$ (8)

$y=-a\left(\frac{1}{2}\right)^2+a\left(\frac{1}{2}\right)+2=\frac{-a}{4}+\frac{a}{2}+2=\frac{a}{4}+2$

$\left(\frac{1}{2},\frac{a}{4}+2\right)\Big\} \; y=2bx^2-bx-1 \quad \frac{a}{4}+2=2b\left(\frac{1}{2}\right)^2-b\left(\frac{1}{2}\right)-1$

$\frac{b}{2}-\frac{b}{2}=0$

$\frac{a}{4}+2=2b\left(\frac{1}{4}\right)-\frac{b}{2}-1=\boxed{-1} \quad \frac{a}{4}+2=-1$

$\frac{a}{4}=-3 \rightarrow a=\boxed{-12} \quad b-a=b-(-12)=b+12$

$\boxed{b-a=b+12}$

$x=\frac{-b}{2a}\Rightarrow \Big\} \; y=c-\frac{b^2}{4a}$ (9)

$A=25\alpha \;,\; B=4 \;,\; C=\beta \quad x=\frac{-4}{2\times 25\alpha}=\frac{-2}{25a} \rightarrow y=\beta-\frac{16}{100\alpha}$

$\beta-\frac{4}{25\alpha} \qquad x=\frac{-2}{25\alpha}$

$a>0\Big\} \; x<0 \qquad \beta>\alpha>0 \rightarrow \beta>0$

$y=\beta-\frac{4}{25\alpha}>0 \longrightarrow$ ناحیه ۲

$a+b=s \qquad ab=p \quad x^2-(a^2+b^2-12)x+a+b-1=0$ (10)

$-(a^2+b^2-12)\Big\} \; a+b=a^2+b^2-12 \quad a+b-1=ab$

$ab=a+b-1 \Big\} \; a^2+b^2=a+b+12 \quad a^2+b^2+2ab=(a+b+12)+$

$2(a+b-1)=3(a+b)+10 \quad s=a+b \quad s^2=3s+10$

$s^2-3s-10=0 \quad (s-5)(s+2)=0 \quad \boxed{s=5}$

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$$4x^3 + \overbrace{\boxed{kx^2 - 9x - 2}}^{\text{معادله}} = 0 \rightarrow \frac{9}{k} = \cancel{\alpha + \beta}^{\,1} \rightarrow \boxed{k = 9}$$

$$\frac{-2}{k} = -2 \rightarrow \boxed{k = 1}$$

$\alpha$ مشکل دارم