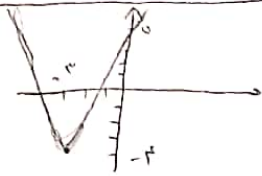


نام و نام خانوادگی ..... ایمان الهادی ..... پاسخنامه تشریحی تکلیف شماره ۱ ..... کلاس ..... دهم ..... فصل ..... B

$M_{in} = \left| \frac{-b}{2a} = \frac{-4}{2} = -2 \right|$ 
 $y = x^2 + 4x + 5$ 
 $M_{in} = \left| \frac{-2}{-1} = 2 \right|$  (الف)



$y = -x^2 + 4x - 3$ 
 $M_{in} = \left| \frac{-b}{2a} = \frac{-4}{-2} = 2 \right|$ 
 $M_{in} = \left| \frac{2}{1} = 2 \right|$  (الف)

$-1(-x^2 + 4x - 3) = 0$

$x^2 - 4x + 3 = 0$   
 $(x-1)(x-3) = 0$

$2x^2 - 3x - a = 0$ 
 $\Delta = b^2 - 4ac = 9 - 4 \times 2 \times (-a) = 9 + 8a$

$9 + 8a \geq 0$   
 $8a \geq -9$   
 $a \geq -\frac{9}{8}$

$\Delta = b^2 - 4ac = 9 + 8a$ 
 $9 + 8a = 0$   
 $8a = -9$   
 $a = -\frac{9}{8}$

$9 + 8a < 0$   
 $8a < -9$   
 $a < -\frac{9}{8}$

$9 + 8a \geq 0$   
 $8a \geq -9$   
 $a \geq -\frac{9}{8}$

الف)  $x^2 - 2x - 1 = 0$   
 $x^2 - 2x - 1 + 2 = 2 \Rightarrow x^2 - 2x + 1 = 2$   
 $(x-1)^2 = 2$   
 $x-1 = \pm\sqrt{2}$   
 $x = 1 \pm \sqrt{2}$

ب)  $x^2 - x - 1 = 0$   
 $x^2 - x - 1 + \frac{1}{4} = \frac{5}{4}$   
 $x^2 - x + \frac{1}{4} = \frac{5}{4}$   
 $(x - \frac{1}{2})^2 = \frac{5}{4}$   
 $x - \frac{1}{2} = \pm\sqrt{\frac{5}{4}}$   
 $x = \frac{1}{2} \pm \frac{\sqrt{5}}{2}$

الف)  $x^2 - 2x - 1 = 0$ 
 $\Delta = b^2 - 4ac = 4 + 4 = 8$ 
 $x = \frac{2 \pm \sqrt{8}}{2} = \frac{2 \pm 2\sqrt{2}}{2} = 1 \pm \sqrt{2}$

ب)  $x^2 + x - 4 = 0$ 
 $\Delta = b^2 - 4ac = 1 + 16 = 17$ 
 $x = \frac{-1 \pm \sqrt{17}}{2}$

$$\text{ا) } x^2 - 11x + 18 = 0$$

$$(x-6)(x-3) = 0 \rightarrow \begin{cases} x=6 \\ x=3 \end{cases}$$

$$\text{ب) } x^2 + 3x - 18 = 0$$

$$(x-6)(x+3) = 0 \rightarrow \begin{cases} x=6 \\ x=-3 \end{cases}$$

$$\text{ا) } \Delta x^2 - 12x + 5 = 0$$

$$x^2 - 12x + 5 = 0$$

$$(x-0)(x-5) = 0 \rightarrow \begin{cases} x = \frac{\Delta}{\Delta} = 1 \\ x = \frac{5}{\Delta} \end{cases}$$

$$\text{ب) } 3x^2 - 10x + 5 = 0$$

$$x^2 - 10x + 15 = 0$$

$$(x-3)(x-5) = 0 \rightarrow \begin{cases} x = \frac{a}{b} = 1 \\ x = \frac{5}{3} \end{cases}$$

(از مجموع ضرایب هم می شه رفت)

$$\text{ا) } 2x^2 - 5x + 3 = 0$$

$$4x^2 - 10x + 6 = 0$$

$$(2x-3)(2x-2) = 0 \rightarrow \begin{cases} 2x-3=0 \\ 2x-2=0 \end{cases} \rightarrow \begin{cases} x=\frac{3}{2} \\ x=1 \end{cases}$$

$$\text{2) } 4x^2 - 4x + 1 = 0$$

$$\Delta = b^2 - 4ac = 16 - 4 = 12$$

$$x = \frac{a \pm \sqrt{\Delta}}{b} = \frac{1 \pm \sqrt{3}}{2} \rightarrow \begin{cases} x = \frac{1+\sqrt{3}}{2} \\ x = \frac{1-\sqrt{3}}{2} \end{cases}$$

$$\text{ب) } 2x^2 + 5x + 3 = 0$$

$$x^2 + 5x + 3 = 0$$

$$(x+2)(x+3) = 0 \rightarrow \begin{cases} x=-2 \\ x=-3 \end{cases}$$

$$\text{3) } 4x^2 + 5x + 4 = 0 \quad \Delta = b^2 - 4ac = 25 - 64 = -39$$

$\Delta < 0$  معادله جواب ندارد

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

$$\text{ا) } S^2 - 2P = \left(\frac{-b}{a}\right)^2 - 2\left(\frac{c}{a}\right) = 9 - 2\left(\frac{-2}{1}\right) = 9 + 4 = 13$$

$$\text{ب) } S^2 - 3SP = 25 + 12 = 37$$

$$S = \frac{-b}{a} = \frac{4}{1} = 4 \quad P = \frac{c}{a} = \frac{-2}{1} = -2$$

$$\text{ا) } \begin{pmatrix} 5 \\ 2 \end{pmatrix} + \begin{pmatrix} 9 \\ 2 \end{pmatrix} = \begin{pmatrix} 5 \\ 2 \end{pmatrix} + \begin{pmatrix} 9 \\ 2 \end{pmatrix} = \frac{5 \times 4}{2} + \frac{9 \times 4}{2} = 20 + 18 = 38$$

$$\text{ب) } \begin{pmatrix} 9 \\ 2 \end{pmatrix} - \begin{pmatrix} 5 \\ 2 \end{pmatrix} = \frac{9 \times 4}{2} - \frac{5 \times 4}{2} = 18 - 10 = 8$$