

19175

نام و نام خانوادگی: پاسخنامه تشریحی تکلیف شماره: کلاس:

الف) $x^2 - 4x + 8 = 0 \xrightarrow{+1} x^2 - 4x + 9 = 1 \Rightarrow (x-2)^2 = 1 \rightarrow x-2 = \pm 1$
 $x = 3 / x = 1$

ب) $x^2 + 8x + 17 = 0 \xrightarrow{+9} x^2 + 8x + 17 = 9 \Rightarrow (x+4)^2 = 9 \rightarrow x+4 = \pm 3$
 $x = -7 / x = -1$

الف) $x^2 - 5x + 4 = 0 \rightarrow (x-1)(x-4) = 0$
 $x-1 = 0 \rightarrow x = 1$
 $x-4 = 0 \rightarrow x = 4$

ب) $x^2 - 5x - 14 = 0 \rightarrow (x+2)(x-7) = 0$
 $x+2 = 0 \rightarrow x = -2$
 $x-7 = 0 \rightarrow x = 7$

الف) $x^2 - 3x - 5 = 0 \rightarrow \frac{-b \pm \sqrt{\Delta}}{2a} \Rightarrow x = \frac{-(-3) \pm \sqrt{49}}{2} \Rightarrow$

$\frac{3 \pm \sqrt{49}}{2}$
 $\frac{3 - \sqrt{49}}{2}$

ب) $2x^2 - 5x + \frac{1}{2} = 0 \rightarrow \frac{-b \pm \sqrt{\Delta}}{2a} \Rightarrow \frac{5 \pm \sqrt{17}}{4} \Rightarrow$

$\frac{5 \pm \sqrt{17}}{4}$
 $\frac{5 - \sqrt{17}}{4}$

الف) $x^2 - 3x - 5 = 0 \rightarrow \cancel{2x^2 - 6x - 10 = 0} \rightarrow (x-1)(x-4) = 0$
 $x = 1$
 $x = 4$

ب) $5x^2 + x - 3 = 0 \rightarrow \frac{-b \pm \sqrt{\Delta}}{2a} \Rightarrow x = \frac{-1 \pm \sqrt{49}}{10} \rightarrow \frac{-1 \pm 7}{10}$
 $\frac{-1+7}{10} = \frac{6}{10} = \frac{3}{5}$
 $\frac{-1-7}{10} = \frac{-8}{10} = -\frac{4}{5}$

الف) $5x^2 - 14x + 8 = 0 \xrightarrow{a \times c} x^2 - 14x + 32 = 0 \rightarrow (x-4)(x-8) = 0$
 $x = 4 / x = 8$

ب) $3x^2 - 10x + 8 = 0 \xrightarrow{a \times c} x^2 - 10x + 24 = 0 \rightarrow (x-4)(x-6) = 0$
 $x = 4 / x = 6$

$x = 1 / x = \frac{1}{2}$

الف) $x^2 - 4x + 1 = 0 \Rightarrow \Delta = 16 - 4 = 12 > 0$

ب) $x^2 - 4x + 2 = 0 \Rightarrow \Delta = 16 - 8 = 8 > 0$

ج) $x^2 - 4x + 4 = 0 \Rightarrow \Delta = 16 - 16 = 0$

د) $x^2 - 4x + 5 = 0 \Rightarrow \Delta = 16 - 20 = -4 < 0$

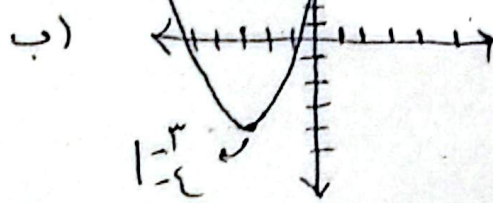
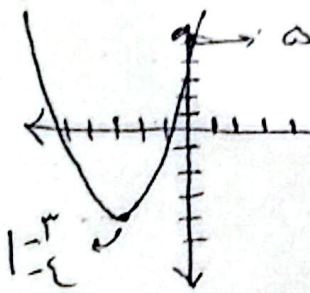
الف) $\Delta > 0 \Rightarrow 9 - 4a > 0 \Rightarrow a < \frac{9}{4}$

ب) $\Delta = 0 \Rightarrow 9 - 4a = 0 \Rightarrow a = \frac{9}{4}$

ج) $\Delta < 0 \Rightarrow 9 - 4a < 0 \Rightarrow a > \frac{9}{4}$

د) $\Delta \geq 0 \Rightarrow 9 - 4a \geq 0 \Rightarrow a \leq \frac{9}{4}$

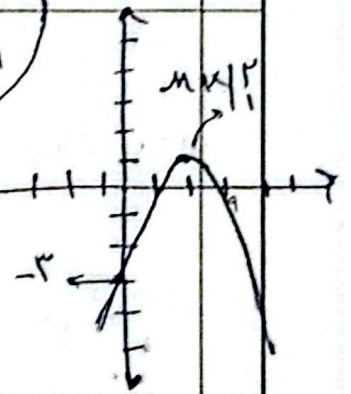
الف) $x = \frac{-b}{2a} = \frac{-4}{2 \times 1} = -2$



$\min \left| \begin{matrix} -4 \\ -4 \end{matrix} \right|$

الف) $x = \frac{-b}{2a} = \frac{-4}{2 \times 1} = -2$

$\max \left| \begin{matrix} 4 \\ 1 \end{matrix} \right|$



ب) $x^2 + 4x - 5 = 0 \Rightarrow (x+5)(x-1) = 0$
 $x^2 - 4x + 3 = 0 \Rightarrow (x-1)(x-3) = 0$
 $x = 1$
 $x = 3$

$S = \frac{-b}{a} = \frac{4}{1} = 4$

1) $S^2 - 4P = 16 - 4 \times 3 = 4$

2) $S^2 - 4P = 16 - 4 \times 3 = 4$