

$$x^2 - 6x = -8 \rightarrow x^2 - 6x + 9 = 1 \rightarrow (x-3)^2 = 1 \rightarrow x-3 = \pm 1$$

$$\boxed{x=4 \text{ و } x=2} \quad \text{(الف)}$$

$$x^2 + 18x = -5 \rightarrow x^2 + 18x + 16 = 9 \rightarrow (x+4)^2 = 9 \rightarrow x+4 = \pm 3$$

$$\boxed{x=-1 \text{ و } x=-7} \quad \text{(ب)}$$

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

$$(x-5)(x+2) = 0 \rightarrow \begin{cases} x=5 \\ x=-2 \end{cases}$$

$$\frac{3 \pm \sqrt{9+21}}{2} \rightarrow \boxed{\frac{3 \pm \sqrt{29}}{2}}$$

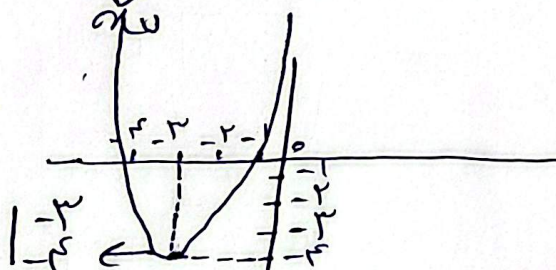
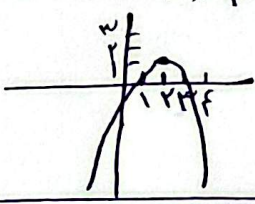
$$\frac{4 \pm \sqrt{14-4}}{4} \rightarrow \boxed{\frac{4 \pm \sqrt{10}}{4}}$$

$$a+b+c=0 \rightarrow \begin{cases} a=1 \\ a=\frac{c}{a} \end{cases} \rightarrow 1+2-3=0 \rightarrow \begin{cases} a=1 \\ a=2 \end{cases}$$

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

$$x^2 - 12x + 36 = (x-6)(x-6) = 0 \rightarrow \begin{cases} x=6 \\ x=6 \end{cases}$$

$$x^2 - 10x + 21 = 0 \rightarrow (x-3)(x-7) = 0 \rightarrow \begin{cases} x=3 \\ x=7 \end{cases}$$

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| <p>در این گونه سوال باید ببینیم که <math>\Delta =</math> مثبت یا منفی یا ه است و می توانیم تعداد ریشه را بدست آوریم</p> <p><math>b^2 - 4ac = 12 - 12 = 0 \rightarrow 12 \rightarrow +</math> <span style="border: 1px solid black; padding: 2px;">۲ ریشه ی حقیقی</span> (الف)</p> <p><math>b^2 - 4ac = 1 - 16 = -15 \rightarrow -15 \rightarrow -</math> <span style="border: 1px solid black; padding: 2px;">ریشه ی حقیقی ندارد</span> (ب)</p> <p><math>b^2 - 4ac = 16 - 16 = 0 \rightarrow 0 \rightarrow 0</math> <span style="border: 1px solid black; padding: 2px;">۱ ریشه ی خالص</span> (ج)</p> <p><math>b^2 - 4ac = 1 - 8 = -7 \rightarrow -7 \rightarrow -</math> <span style="border: 1px solid black; padding: 2px;">ریشه ی حقیقی ندارد</span> (د)</p> | <p>(الف) باید + باشد <math>\Delta = (-3)^2 - 1a = 9 - 1a \rightarrow 9 - 1a &gt; 0 \rightarrow a &lt; \frac{9}{1}</math></p> <p>(ب) باید = باشد <math>\Delta = 9 - 1a \rightarrow 9 - 1a = 0 \rightarrow a = \frac{9}{1}</math></p> <p>(ج) باید <math>\Delta</math> منفی باشد <math>\Delta = 9 - 1a \rightarrow a &gt; \frac{9}{1}</math></p> <p>(د) باید بزرگتر حسابی و باشد <math>\Delta = 9 - 1a \rightarrow 9 - 1a &gt; 0 \rightarrow a &lt; \frac{9}{1}</math></p> | <p>(الف) <math>\frac{-b}{2a} = \frac{-6}{2} = -3 \rightarrow (-3)^2 + 6(-3) + 7 = -4</math></p> <p><math>V = \begin{vmatrix} 1 &amp; -3 \\ 1 &amp; -4 \end{vmatrix}</math></p>  <p>(ب)</p> | <p>(الف) <math>\frac{-b}{2a} = \frac{-4}{-2} = 2 \rightarrow -4 + 1 \cdot 2 = -2 \rightarrow V = \begin{vmatrix} 1 &amp; 2 \\ 1 &amp; 1 \end{vmatrix}</math></p>  <p>(ب) <math>a = 1</math> و <math>a = 3 \rightarrow \begin{vmatrix} 1 &amp; 3 \\ 0 &amp; 0 \end{vmatrix}</math></p> <p>بفرض <math>a = 1</math> <math>-a^2 + 4a - 3 = 0 \rightarrow (a-1)(a-3) = 0</math></p> | <p>(الف) <math>S = -\frac{b}{a} = \frac{2}{1} = 2</math> و <math>P = \frac{c}{a} = \frac{-2}{1} = -2</math></p> <p><math>9 - (-4) = 13</math></p> <p><math>27 - (-18) = 45</math></p> <p>(ب)</p> |
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