

نام و نام خانوادگی پاسخنامه تشریحی تکلیف شماره ۱... کلاس دهم... A... ۲۰

$$1) x^2 - 4x + 8 = 0 \xrightarrow{+1} x^2 - 4x + 9 = 1 \Rightarrow (x-2)^2 = 1 \Rightarrow x-2 = \pm 1 \begin{cases} x=3 \\ x=1 \end{cases}$$

$$2) x^2 + 8x + 7 = 0 \xrightarrow{+9} x^2 + 8x + 17 = 9 \Rightarrow (x+4)^2 = 9 \Rightarrow x+4 = \pm 3 \begin{cases} x=-7 \\ x=-1 \end{cases}$$

$$1) x^2 - 8x + 9 = 0 \Rightarrow (x-2)(x+3) \begin{cases} x=3 \\ x=2 \end{cases}$$

$$2) x^2 - 8x - 15 = 0 \Rightarrow (x-7)(x+2) \begin{cases} x=7 \\ x=-2 \end{cases}$$

$$1) x^2 - 3x - 10 = 0 \Rightarrow x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \Rightarrow \frac{3 \pm \sqrt{9 + 40}}{2} = \begin{cases} \frac{3 + \sqrt{49}}{2} \\ \frac{3 - \sqrt{49}}{2} \end{cases}$$

$$2) 2x^2 - 8x + \frac{1}{2} = 0 \Rightarrow x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \Rightarrow \frac{4 \pm \sqrt{16 - 2}}{2} = \begin{cases} \frac{4 + \sqrt{14}}{2} = \frac{4 + \sqrt{14}}{2} \\ \frac{4 - \sqrt{14}}{2} = \frac{4 - \sqrt{14}}{2} \end{cases}$$

$$1) x^2 - 3x + 2 = 0 \xrightarrow{a+b+c=0} \begin{cases} x=1 \\ x=\frac{c}{a}=2 \end{cases}$$

$$2) \underline{2x^2 + x - 3} = 0 \xrightarrow{+1} x^2 + x - 12 = 0 = (x+4)(x-3) \begin{cases} x=\frac{3}{2} \\ x=-\frac{4}{2} = -2 \end{cases}$$

$$1) \underline{2x^2 - 12x + 7} = 0 \Rightarrow x^2 - 6x + \frac{7}{2} = 0 \Rightarrow (x-3)(x-\frac{7}{2}) \begin{cases} x=\frac{7}{2} \\ x=\frac{7}{2} = 3.5 \end{cases}$$

$$2) \underline{3x^2 - 10x + 7} = 0 \Rightarrow x^2 - 10x + 7 = 0 \Rightarrow (x-3)(x-7) \begin{cases} x=\frac{7}{3} \\ x=\frac{7}{3} = 2.33 \end{cases}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \rightarrow \Delta = b^2 - 4ac$$

$$1) -x^2 + 5x - 1 = 0 \Rightarrow \Delta = 25 - 12 = 13 \quad \text{دو مثبت} \leftarrow \text{دارای ۲ ریشه حقیقی}$$

$$2) 2x^2 - x + 2 = 0 \Rightarrow \Delta = 1 - 16 = -15 \quad \text{دو منفی} \leftarrow \text{فاصله ریشه}$$

$$3) 2x^2 - 5x + 2 = 0 \Rightarrow \Delta = 25 - 16 = 9 \quad \text{دو منفی} \leftarrow \text{دارای ۲ ریشه مضاعف}$$

$$4) 2x^2 - x + 1 = 0 \Rightarrow \Delta = 1 - 8 = -7 \quad \text{دو منفی} \leftarrow \text{فاصله ریشه}$$

$$\text{الف } \Delta > 0 \Rightarrow b^2 - 4ac = 9 - 12a > 0 \Rightarrow a < \frac{3}{4}$$

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

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$$\text{ب } \Delta = 0 \Rightarrow b^2 - 4ac = 9 - 12a = 0 \Rightarrow a = \frac{3}{4}$$

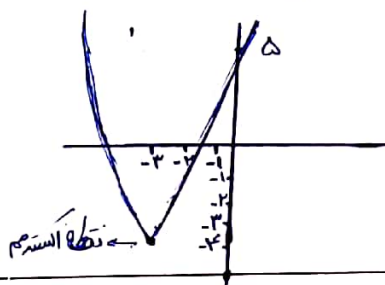
$$\text{ج } \Delta < 0 \Rightarrow b^2 - 4ac = 9 - 12a < 0 \Rightarrow a > \frac{3}{4}$$

$$\text{د } \Delta \geq 0 \Rightarrow b^2 - 4ac = 9 - 12a \geq 0 \Rightarrow a \leq \frac{3}{4}$$

$$1) \text{ د } \Delta = \frac{b^2}{4a} \Rightarrow \frac{9}{4} = -3$$

$$\text{عرض} = \frac{-\Delta}{2a} = \frac{-(12 - 10)}{4} = \frac{-2}{4} = -\frac{1}{2}$$

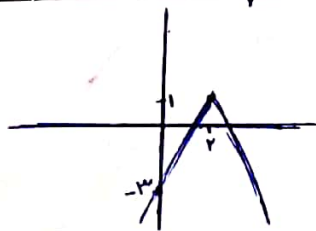
$$a > 0 \Rightarrow \text{سیمی دارای منبسط}$$



۲۱

$$\text{د } \Delta = \frac{b^2}{4a} \Rightarrow \frac{9}{4} = 2$$

$$\text{عرض} = \frac{-\Delta}{2a} = \frac{-(12 - 12)}{4} = 0$$



$$1) x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \Rightarrow \frac{-4 \pm \sqrt{16 - 12}}{-2} < \frac{-4 + \sqrt{4}}{-2} = 1 \text{ و } \frac{-4 - \sqrt{4}}{-2} = -3$$

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

$$\text{طبق نکته} \Rightarrow S = \frac{-b}{a} = 2$$

$$P = \frac{c}{a} = \frac{-3}{1} = -3$$

$$1) S - 2P = 2 - 2(-3) = 2 + 6 = 8$$

$$2) S - 3P = 2 - 3(-3) = 2 + 9 = 11$$