

نام و نام خانوادگی پایه و سال پاسخنامه تشریحی تکلیف شماره ۱ کلاس

الف) $x^2 - 4x + 8 = 0 \rightarrow x^2 - 4x + 9 - 1 = 0 \rightarrow (x - 2)^2 - 1 = 0$
 $\rightarrow x - 2 = \pm 1 \rightarrow \boxed{x = 2} \quad \boxed{x = 4}$ ✓

ب) $x^2 + 8x + 7 = 0 \rightarrow x^2 + 8x + 14 - 9 = 0 \rightarrow (x + 4)^2 = 9 \rightarrow x + 4 = \pm 3$
 $\boxed{x = -1} \quad \boxed{x = -7}$ ✓ (2)

الف) $x^2 - 5x + 6 = 0 \quad (x - 2)(x - 3) = 0 \quad \boxed{x = 2} \quad \boxed{x = 3}$ ✓

ب) $x^2 - 5x - 14 = 0 \quad (x - 7)(x + 2) = 0 \quad \boxed{x = 7} \quad \boxed{x = -2}$
 (2) ✓

الف) $x^2 - 3x - 5 = 0 \quad \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \Rightarrow \boxed{x = \frac{3 \pm \sqrt{29}}{2}}$ ✓ (2)

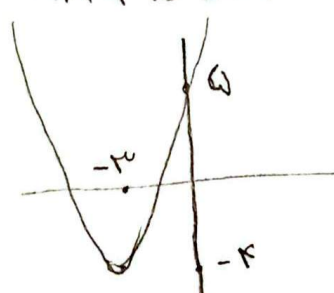
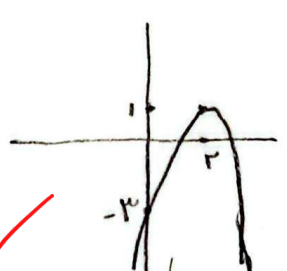
ب) $2x^2 - 4x + \frac{1}{2} = 0 \quad \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \Rightarrow x = \frac{1 \pm \sqrt{12}}{2} \Rightarrow \boxed{x = 1 \pm \frac{\sqrt{3}}{2}}$ ✓

الف) $x^2 - 3x + 2 = 0 \Rightarrow (x - 1)(x - 2) = 0 \Rightarrow \boxed{x = 1} \quad \boxed{x = 2}$ ✓

ب) $4x^2 + x - 5 = 0 \quad x^2 + x - 12 = 0 \quad (x + 4)(x - 3) = 0$
 $\boxed{x = -\frac{4}{3}} = -1 \quad \boxed{x = \frac{3}{4}}$ ✓ (2)

الف) $5x^2 - 12x + 7 = 0 \quad x^2 - 12x + 35 = 0 \Rightarrow (x - 5)(x - 7) = 0$
 $\begin{cases} x_1 = 5 \div 5 \rightarrow x_1 = 1 \\ x_2 = 7 \rightarrow x_2 = \frac{7}{5} \end{cases}$
 $\boxed{x = \frac{5}{5}} \quad \boxed{x = \frac{7}{5}}$ ✓

ب) $3x^2 - 10x + 7 = 0 \quad x^2 - 10x + 21 = 0 \quad (x - 3)(x - 7) = 0$
 $\boxed{x = \frac{3}{3}} = 1 \quad \boxed{x = \frac{7}{3}}$ ✓ (11/2/5)

✓ (1) $\Delta = 25 - 12 = 13 \rightarrow$ مثبت $\rightarrow$ دو ریشه $\rightarrow \frac{-5 \pm \sqrt{13}}{-9}$ ✓ (2) $\Delta = 1 - 19 = -18 \rightarrow$ منفی زیرادکال $\rightarrow$ ریشه حقیقی ندارد ✓ (3) $\Delta = 19 - 19 = 0 \rightarrow$ یک ریشه $\rightarrow \frac{4}{4} = 1$ ✓ (4) $\Delta = 1 - 8 = -7 \rightarrow$ منفی زیرادکال $\rightarrow$ ریشه حقیقی ندارد	۶ ۲
$\Delta = 9 - 16a \rightarrow \Delta > 0 \rightarrow a < \frac{9}{16}$ ✓ $\Delta = 9 - 16a \rightarrow \Delta = 0 \rightarrow a = \frac{9}{16}$ ✓ $\Delta = 9 - 16a \rightarrow \Delta < 0 \rightarrow a > \frac{9}{16}$ ✓ $\Delta = 9 - 16a \rightarrow \Delta \geq 0 \rightarrow a \leq \frac{9}{16}$ ✓	الف () ب () ج () د () ۲ ۷
$\frac{-b}{2a} = \frac{-9}{2} = -4.5$ $9 - 16 + 5 = -2$ ✓ $\left \begin{matrix} -3 \\ -4 \end{matrix} \right.$ min (الف)  ۲	ب () ۸
$\frac{-b}{2a} = \frac{-4}{-2} = 2$ $-4 + 1 - 3 = -6$ ✓ $\left \begin{matrix} 2 \\ 1 \end{matrix} \right.$ max (الف)  ۲ $-x^2 + 4x - 3 = 0$ $x^2 - 4x + 3 = 0$ $(x-1)(x-3)$ $x=1$ $x=3$	ب () ۹
$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{3 \pm \sqrt{14}}{2}$ $5^2 - 4p = 9 + 4 = 13$ ✓ $3^2 - 3sp = 27 + 18 = 45$ ✓ $S = \frac{3 + \sqrt{14}}{2} + \frac{3 - \sqrt{14}}{2} = \frac{3}{2} + \frac{3}{2} = \frac{9}{2} = 4.5$ $P = \frac{(3 + \sqrt{14})}{2} \times \frac{(3 - \sqrt{14})}{2} = \frac{9 - 14}{4} = \frac{-5}{4} = -1.25$	الف () ب () ۲ ۱۰