

نام و نام خانوادگی: آرشام پورموسی پاسخنامه تشریحی تکلیف شماره کلاس ششم - ۱۳۹۳

الف: $x^2 - 6x + 1 = 0 \rightarrow x^2 - 6x + 9 = 1 \Rightarrow (x-3)^2 = 1 \Rightarrow x-3 = \pm 1$
 $\Rightarrow x = 4$ و $x = 2$

ب: $x^2 + 11x + 1 = 0 \rightarrow x^2 + 11x + 14 = 9 \Rightarrow (x+4)^2 = 9 \Rightarrow x+4 = \pm 3$
 $\Rightarrow x = -1$ و $x = -7$

الف: $x^2 - 5x + 4 = 0 = (x-1)(x-4) \Rightarrow x = 1$ و $x = 4$

ب: $x^2 - 5x - 14 = 0 = (x-7)(x+2) \Rightarrow x = 7$ و $x = -2$

الف: $x^2 - 3x - 5 = 0 \Rightarrow \Delta = 3 \pm \sqrt{9+20} = \frac{3 \pm \sqrt{29}}{2}$

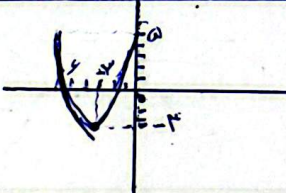
ب: $2x^2 - 4x + \frac{1}{2} = 0 \Rightarrow \Delta = \frac{4 \pm \sqrt{16-2}}{2} = \frac{4 \pm \sqrt{14}}{2} = 2 \pm \frac{\sqrt{14}}{2}$
 $\frac{4 - \sqrt{14}}{2} = 2 - \frac{\sqrt{14}}{2}$

الف: $x^2 - 3x + 2 = 0 = (x-1)(x-2) \Rightarrow x = 1$ و $x = 2$

ب: $2x^2 + x - 3 = 0 \Rightarrow \Delta = \frac{-1 \pm \sqrt{1+24}}{4} = \frac{-1 \pm 5}{4}$
 $\frac{-1+5}{4} = 1 = x$
 $\frac{-1-5}{4} = -\frac{3}{2} = x$

الف: $0x^2 - 12x + 1 = 0 \xrightarrow{\text{و س}} x^2 - 12x + 36 = (x-6)(x-6) = 0$

ب: $3x^2 - 10x + 1 = 0 \xrightarrow{\text{و س}} x^2 - 10x + 1 = 0$
 $\Rightarrow x = 5$ و $x = 0$
 $\Rightarrow x = 3$ و $x = 7$
 $\Rightarrow x = \frac{10}{3} = 3\frac{1}{3}$ و $x = \frac{1}{3}$
 $x = \frac{10}{3}$ و $x = \frac{1}{3}$

$\Delta = b^2 - 4ac$	$-3x^2 + 6x - 1 = 0 \Rightarrow \Delta = 36 - 12 = 24 \Rightarrow \Delta > 0$ الف:	
$2x^2 - x + 2 = 0 \Rightarrow \Delta = 1 - 16 = -15 \Rightarrow \Delta < 0 \Rightarrow$	$\Rightarrow$ <u>ریشه ندارد</u> (2)	
$2x^2 - 4x + 2 = 0 \Rightarrow \Delta = 16 - 16 = 0 \Rightarrow \Delta = 0 \Rightarrow$	$\Rightarrow$ <u>یک ریشه دارد</u> (1)	
$2x^2 - x + 1 = 0 \Rightarrow \Delta = 1 - 8 = -7 \Rightarrow \Delta < 0 \Rightarrow$	$\Rightarrow$ <u>ریشه ندارد</u> (0)	
$9 - 16a > 0 \Rightarrow a < \frac{9}{16}$	$\Delta > 0 \Rightarrow 9 - 16a > 0 \Rightarrow a < \frac{9}{16}$ الف:	
$\Delta = 0 \Rightarrow 9 - 16a = 0 \Rightarrow a = \frac{9}{16}$	ب:	
$\Delta < 0 \Rightarrow 9 - 16a < 0 \Rightarrow a > \frac{9}{16}$	ج:	
$\Delta \geq 0 \Rightarrow 9 - 16a \geq 0 \Rightarrow a \leq \frac{9}{16}$	د:	
$y = x^2 + 4x + 6 \Rightarrow \Delta = 16 - 24 = -8$ $x_s = -\frac{b}{2a} = -\frac{4}{2} = -2$ $y_s = -\frac{\Delta}{4a} = -\frac{-8}{4} = 2$	$a > 0 \Rightarrow \min$ الف: $(-2, 2)$ $(-2, 2)$	
		
$\frac{-b \pm \sqrt{\Delta}}{2a} = \frac{-(-2) \pm \sqrt{4}}{2(-1)} = \frac{2 \pm 2}{-2}$ $\Rightarrow \alpha = 1, \beta = 3$	$y = -x^2 + 2x - 3 \Rightarrow \Delta = 4 - 24 = -20$ $x_s = -\frac{b}{2a} = -\frac{2}{-2} = 1$ $y_s = -\frac{\Delta}{4a} = -\frac{-20}{-4} = -5$ $\Delta = 4 - 24 = -20$ الف: $a < 0 \Rightarrow \max$ $(1, -5)$	
$x^2 - 3x - 2 = 0$ $a = 1$ $b = -3$ $c = -2$ $s = -\frac{b}{a} = 3$ $p = \frac{c}{a} = -2$	$s^2 - 2p = 3^2 - 2(-2) = 9 + 4 = 13$ الف: $s^3 - 3sp = 3^3 - 3(3)(-2) = 27 + 18 = 45$ ب:	