

نام و نام خانوادگی: لیلی شاهی پاسخنامه تشریحی تکلیف شماره ۱... کلاس: A

الف) $x^2 - 4x + 8 = 0 \xrightarrow{+4} x^2 - 4x + 16 = 12 \Rightarrow (x-2)^2 = 12 \Rightarrow x-2 = \pm 2\sqrt{3} \Rightarrow x = 2 \pm 2\sqrt{3}$

ب) $x^2 + 8x + 17 = 0 \Rightarrow x^2 + 8x + 16 = -1 \Rightarrow (x+4)^2 = -1 \Rightarrow x+4 = \pm i \Rightarrow x = -4 \pm i$

ج) $x^2 + 4 = 0 \Rightarrow x^2 = -4 \Rightarrow x = \pm 2i$

الف) $x^2 - 5x + 6 = 0 \Rightarrow (x-2)(x-3) = 0 \Rightarrow x-2=0 \Rightarrow x=2$
 $x-3=0 \Rightarrow x=3$

ب) $x^2 - 6x - 16 = 0 \Rightarrow (x-8)(x+2) = 0 \Rightarrow x-8=0 \Rightarrow x=8$
 $x+2=0 \Rightarrow x=-2$

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

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

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

ب) $x^2 + x - 12 = 0 \Rightarrow x^2 + x - 12 = 0 \Rightarrow (x-3)(x+4) = 0 \Rightarrow x-3=0 \Rightarrow x=3$
 $x+4=0 \Rightarrow x=-4$

ج) $x^2 + x - 12 = 0 \Rightarrow x^2 + x - 12 = 0 \Rightarrow (x-3)(x+4) = 0 \Rightarrow x-3=0 \Rightarrow x=3$
 $x+4=0 \Rightarrow x=-4$

الف) $x^2 - 12x + 35 = 0 \Rightarrow x^2 - 12x + 35 = 0 \Rightarrow (x-5)(x-7) = 0 \Rightarrow x-5=0 \Rightarrow x=5$
 $x-7=0 \Rightarrow x=7$

ب) $x^2 - 10x + 21 = 0 \Rightarrow x^2 - 10x + 21 = 0 \Rightarrow (x-3)(x-7) = 0 \Rightarrow x-3=0 \Rightarrow x=3$
 $x-7=0 \Rightarrow x=7$

$$\Delta = b^2 - 4ac$$

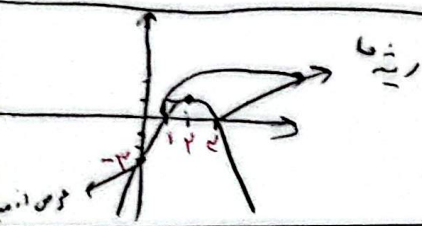
1) $-3x^2 + 4x - 1 = 0 \Rightarrow 12 - 16 = -4 \Rightarrow$ ریشه ها
 2) $2x^2 - x + 2 = 0 \Rightarrow 1 - 16 = -15 \Rightarrow$ ریشه ها
 3) $2x^2 - 2x + 2 = 0 \Rightarrow 17 - 16 = 1 \Rightarrow$ ریشه ها
 4) $2x^2 - x + 1 = 0 \Rightarrow 1 - 8 = -7 \Rightarrow$ ریشه ها

$2x^2 - 3x + a = 0, \Delta = b^2 - 4ac$

1) $b^2 - 4ac = 9 - 4a > 0 \Rightarrow 9 > 4a \Rightarrow \frac{9}{4} > a \Rightarrow a \in (-\infty, \frac{9}{4})$

2) $b^2 - 4ac = 9 - 4a < 0 \Rightarrow 9 < 4a \Rightarrow \frac{9}{4} < a \Rightarrow a \in (\frac{9}{4}, +\infty)$

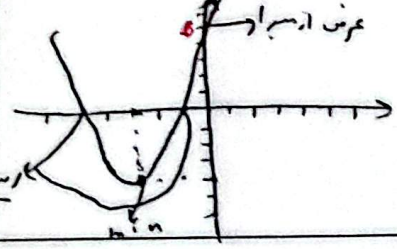
3) $a \in (-\infty, \frac{9}{4}]$ ریشه ها
 این سوال را است



4) $x = 1$
 $x = \frac{c}{a} = 3$

$y = 9x^2 + 4x + 2$

5) $\min \rightarrow$ دارای بیشینه
 $\left| \begin{array}{l} -\frac{b}{2a} \\ -\frac{\Delta}{4a} \end{array} \right| \Rightarrow -\frac{b}{2a} = -\frac{4}{2} = -2, -\frac{\Delta}{4a} = -\frac{16-4}{4} = -3 \Rightarrow$



6) $x = -1$
 $x = -\frac{c}{a} = -2$

7) $9x^2 - 3x - 2 = 0 \Rightarrow S = -\frac{b}{a}, P = \frac{c}{a} \Rightarrow S = -\frac{-3}{9} = \frac{1}{3}, P = \frac{-2}{9} = -\frac{2}{9}$

8) $S^2 - 2SP = 9 + \frac{4}{9} = \frac{82}{9}$