

الف: سوال ۱

$$x^2 - 6x + 8 = 0 \Rightarrow x^2 - 6x + 9 = 1 \Rightarrow (x-3)(x-3) = 1$$

$$\Rightarrow \begin{cases} x=2 \\ x=4 \end{cases}$$

$$\text{ب: } x^2 + 8x + 16 = 0 \Rightarrow x^2 + 8x + 16 = 0 \Rightarrow (x+4)(x+4) = 0$$

$$\Rightarrow \begin{cases} x=-4 \\ x=-4 \end{cases}$$

سوال ۲ الف: $x^2 - 5x + 6 = 0 \Rightarrow (x-2)(x-3) = 0 \Rightarrow \begin{cases} x=2 \\ x=3 \end{cases}$

ب: $x^2 - 5x - 12 = 0 \Rightarrow (x-7)(x+2) = 0 \Rightarrow \begin{cases} x=7 \\ x=-2 \end{cases}$

الف: سوال ۳

$$x^2 - 3x - 4 = 0 \Rightarrow x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{3 \pm \sqrt{9 - (-16)}}{2} = \frac{3 \pm \sqrt{25}}{2}$$

ب: $2x^2 - 3x + \frac{1}{2} = 0 \Rightarrow x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{3 \pm \sqrt{9 - 2}}{4}$

$$\Rightarrow \begin{cases} x = \frac{3 + \sqrt{7}}{4} = \frac{3 + \sqrt{7}}{4} \\ x = \frac{3 - \sqrt{7}}{4} = \frac{3 - \sqrt{7}}{4} \end{cases}$$

الف:

سوال ۴

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

ب: $4x^2 + x - 3 = 0 \Rightarrow x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} \Rightarrow x = \frac{-1 \pm \sqrt{1 - (-12)}}{8}$

$$\text{s.a.m} \Rightarrow \begin{cases} x = \frac{-1 + \sqrt{13}}{8} = \frac{-1 + \sqrt{13}}{8} \\ x = \frac{-1 - \sqrt{13}}{8} = \frac{-1 - \sqrt{13}}{8} \end{cases}$$

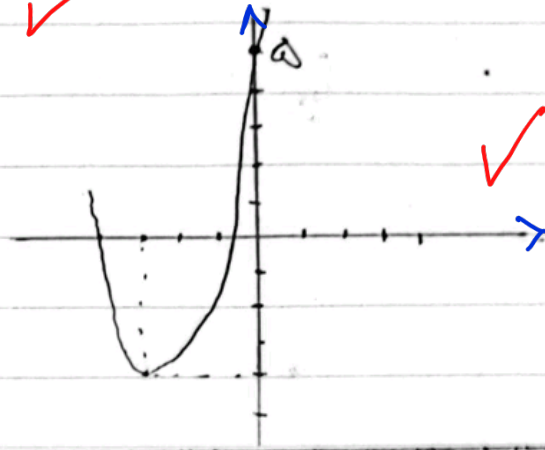
$$\text{طول نقطہ الاسترم} = \frac{-b}{2a} = \frac{-6}{2} = -3$$

سوال ۸

$$\text{عرض نقطہ} = \frac{-\Delta}{4a} = \frac{-(b^2 - 4ac)}{4a} = \frac{-(36 - 20)}{4} = -4$$

$$\text{نقطات نقطہ الاسترم} = (-3, -4) \quad \checkmark$$

$$\text{عرض از مبدأ} = 5$$

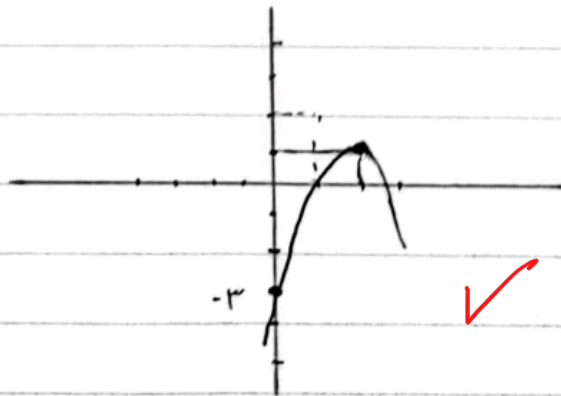


سوال ۹

$$\text{طول نقطہ الاسترم} = \frac{-b}{2a} = \frac{-4}{-2} = 2$$

$$\text{عرض} = \frac{-\Delta}{4a} = \frac{-(b^2 - 4ac)}{4a} = \frac{-(16 - 12)}{-4} = 1$$

$$\text{نقطات} = (2, 1)$$



زمانی محور x ها را قطع می کند که $y = 0$

$$-x^2 + 4x - 3 = 0 \Rightarrow x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \frac{-4 \pm \sqrt{16 - 12}}{-2}$$

s.a.m

$$\Rightarrow \begin{cases} x = \frac{-4 + 2}{-2} = 1 \\ x = \frac{-4 - 2}{-2} = 3 \end{cases} \quad \checkmark$$

Subject:

Date:

سوال 10

الف: $S = \frac{-b}{a} = - \frac{(-2)}{1} = 2$

$P = \frac{c}{a} = \frac{-2}{1} = -2$

$\Rightarrow S^2 - 2P = 2^2 - 2(-2) = (12)$

ب: $S^3 - 3SP = 2^3 - (2 \times 3 \times (-2)) = 8 + 12 = (20)$

✓ (2)