

(م. حشر)

تکالیف شماره ۳

فاطمه سلیمانی

سوال ۱

الف) $y_1^3 - x_1 = 2x_1^2$

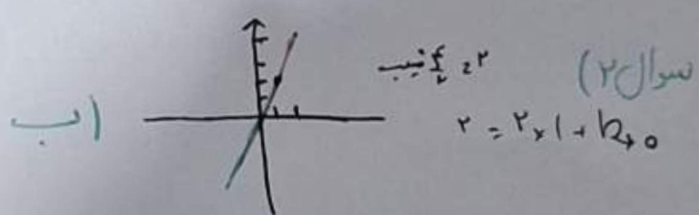
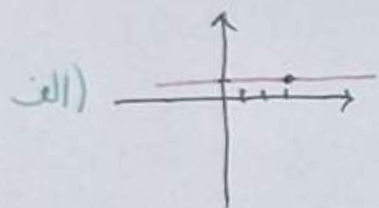
$y_2^3 - x_2 = 2x_2^2$

if $x_1 = x_2 \rightarrow y_1^3 = y_2^3 \Rightarrow y_1 = y_2$ تابع است

ب) $x=0 \rightarrow |y| = 3 \Rightarrow y = \pm 3$ تابع نیست

د) $x=0 \rightarrow y = \frac{\pi}{2}, \frac{3\pi}{2}, \dots$ تابع نیست

ج) $\sqrt{x-4} + |y-2| = 0$
 $x=4 \rightarrow y=2$ تابع است



الف) $y = x$ $a=1, b=0$ $1 \neq \frac{2 \times 0}{0} = 1$

ب) $\frac{-b}{2a} = 2$

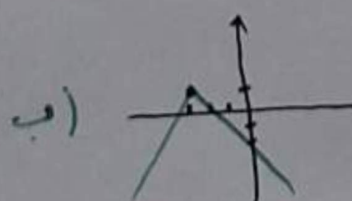
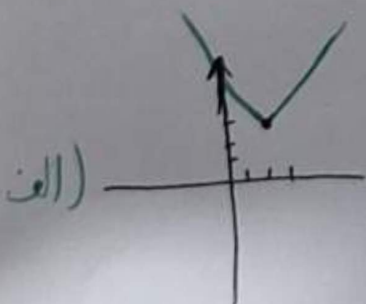
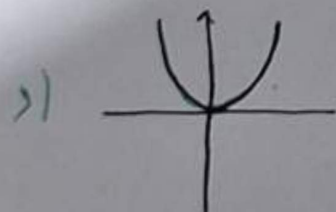
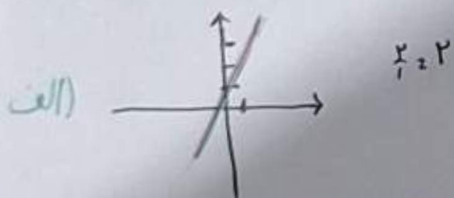
$\frac{-\Delta}{4a} = 1$

$\frac{-4 \times 1}{4} = 2$

$1 = 4 - 8 + b \rightarrow b = 5$

$-4 + 10 = 6$

$a = -4$
 $b = 5$



سوال ۲

سوال (٢)

ا) $x^r - t x \rightarrow x(x-t) > 0 \quad D_f = \mathbb{R} - \{0, t\}$

ب) $\Delta < 0 \quad D_f = \mathbb{R} \quad \text{ج) } \Delta > 0 \quad D_f = \mathbb{R}$

د) $x^r(x^r - t) \rightarrow x^r(x+r)(x-r) \quad D_f = \mathbb{R} - \{0, r, -r\}$

سوال (٧)

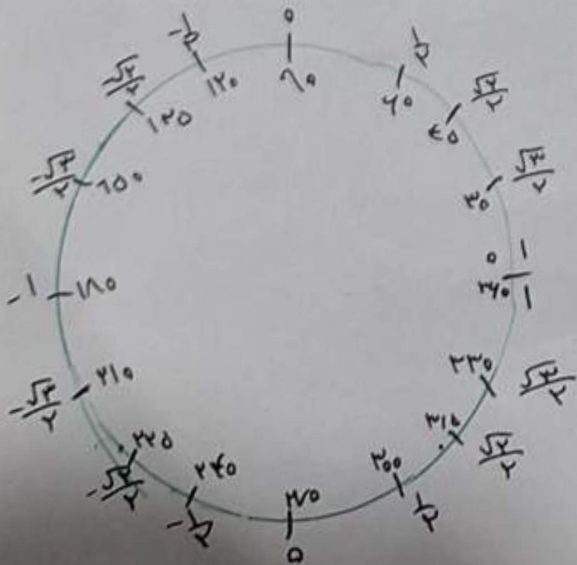
ا) $4 - x \geq 0 \quad x \leq 4, \quad \frac{x-2 \geq 0}{x \geq 2} \rightarrow 2 \leq x \leq 4 \quad D_f = [2, 4]$

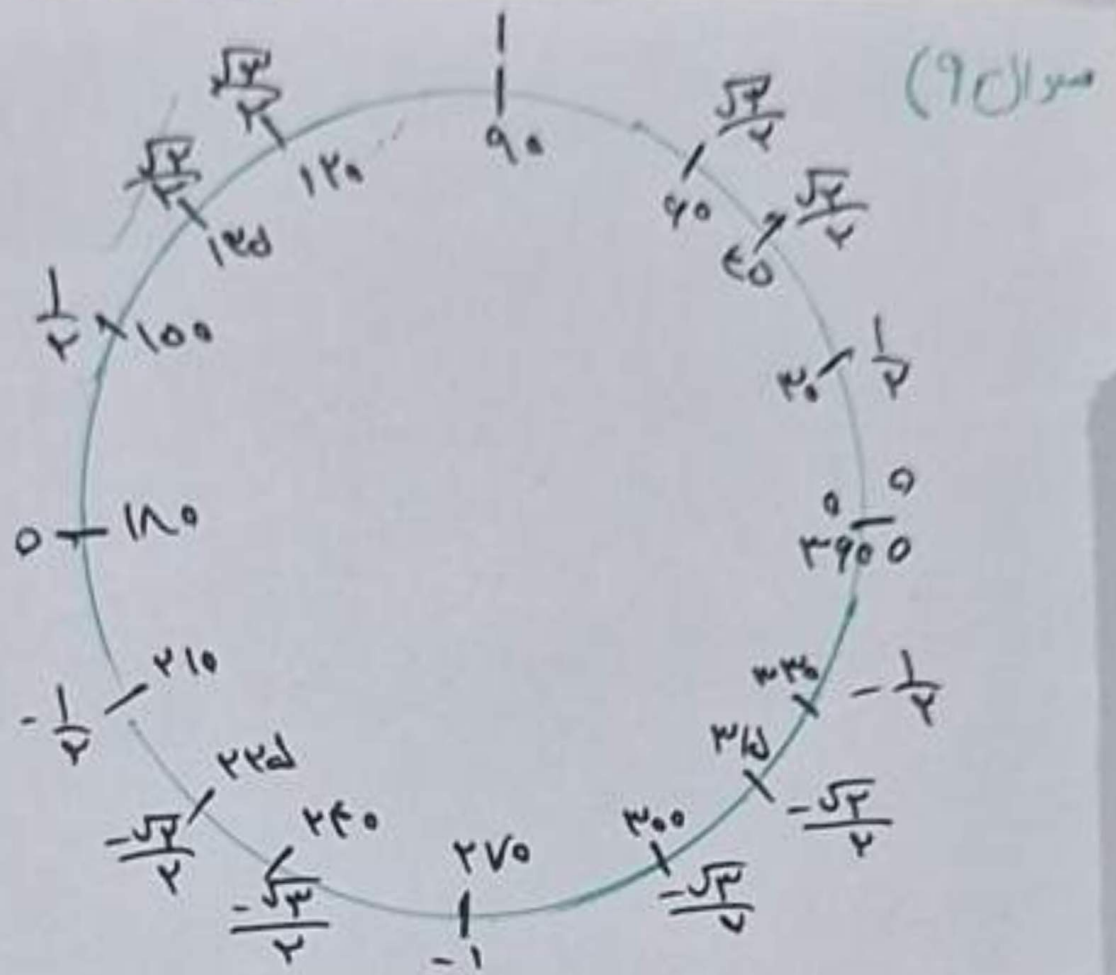
ب) $x^r + 1 \rightarrow x^r = -1 \quad D_f = \mathbb{R}$

ج) $x - 2 \geq 0 \rightarrow x \geq 2, \quad x \neq 2 \quad D_f = [2, +\infty) - \{2\}$

د) $|x| = x^r \rightarrow x = 0 \quad D_f = \mathbb{R} - \{0\}$

سوال (٨)





سوال (١٥)

الف) $\frac{2\pi}{3} \rightarrow -\frac{1}{2} \rightarrow \frac{1}{2}$

$\sin u = \frac{1}{2} \rightarrow \frac{\pi}{6}, \frac{5\pi}{6}$

ب) $\frac{11\pi}{6} \rightarrow \frac{\sqrt{3}}{2} \rightarrow -\frac{\sqrt{3}}{2}$

$\sin u = -\frac{\sqrt{3}}{2} \rightarrow \frac{4\pi}{3}, \frac{5\pi}{3}$