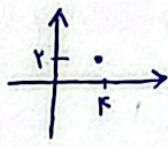


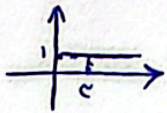
19125

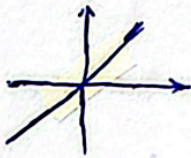
نام و نام خانوادگی: باسرخامه تشریحی تکلیف شماره ۳... کلاس:

الف) $y^3 - x = 2x^2 \Rightarrow y^3 = 2x^2 + x \Rightarrow \begin{cases} y_1^3 = 2x_1^2 + x_1 \\ y_2^3 = 2x_2^2 + x_2 \end{cases} \xrightarrow{x_1=x_2} y_1^3 = y_2^3 \Rightarrow y_1 = y_2$ تابع است

ب) $|y| + x^2 = x + 3 \xrightarrow{x=0} |y| = 3 \Rightarrow y = \pm 3$ تابع نیست

ج) $\sqrt{x-2} + |y-2| = 0 \Rightarrow \begin{cases} x=2 \\ y=2 \end{cases}$ تابع است  $x = \cos y$ تابع نیست

الف) $y = 1$ 

ب) $y = 2x$ 

$y = ax + b \xrightarrow[a=b=0]{a=1} y = x$ تابع است

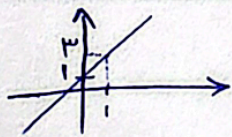
$y = x^2 + ax + b \xrightarrow[a=-4]{x=2} y = 4 - 2a + b$ تابع است

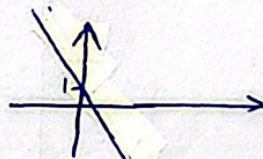
$\begin{cases} -a/2 = 2 \\ -4 + b = 1 \end{cases} \Rightarrow \begin{cases} a = -4 \\ b = 5 \end{cases}$

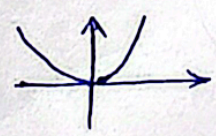
$a + 2b = 1 \Rightarrow 1 = 4 - 8 + 5 + b \Rightarrow b = 0$

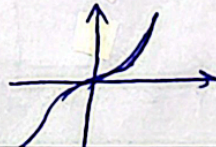
$a + 2b = -4 + 10 = 6$

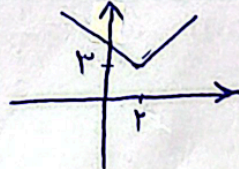
$a + 2b = -4 + 7 = 3$

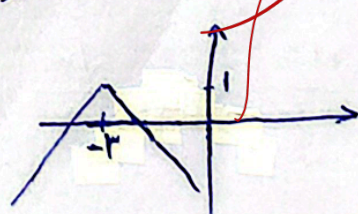
الف) $y = 2x + 1$ 

ب) $y = -2x + 1$ 

ج) $y = x^2$ 

د) $y = x^3$ 

الف) $y = |x - 2| + 3$ 

ب) $y = -|x + 3| + 1$ 

$$الف) y = \frac{x+K}{x^2-Ex} \Rightarrow x^2 - Ex \neq 0 \Rightarrow x(x-E) \neq 0 \Rightarrow x \neq 0, K$$

$$ب) y = \frac{x+K}{x^2-7x+12} \Rightarrow x^2 - 7x + 12 \neq 0$$

$$\Delta = 49 - 4(1)(12) = -15$$

$$D_f = \mathbb{R} - \{0, K\}$$

$$ج) y = \frac{x+5}{x^2+x+K} \Rightarrow x^2 + x + K \neq 0$$

$$\Delta = 1 - 4(1)(K) = -15$$

$$D_f = \mathbb{R}$$

$$د) y = \frac{x+K}{x^2-Kx^2} \Rightarrow x^2 - Kx^2 \neq 0 \Rightarrow x^2(x^2-E) \neq 0 \Rightarrow x^2(x+2)(x-2) \neq 0 \quad D_f = \mathbb{R} - \{0, \pm 2\}$$

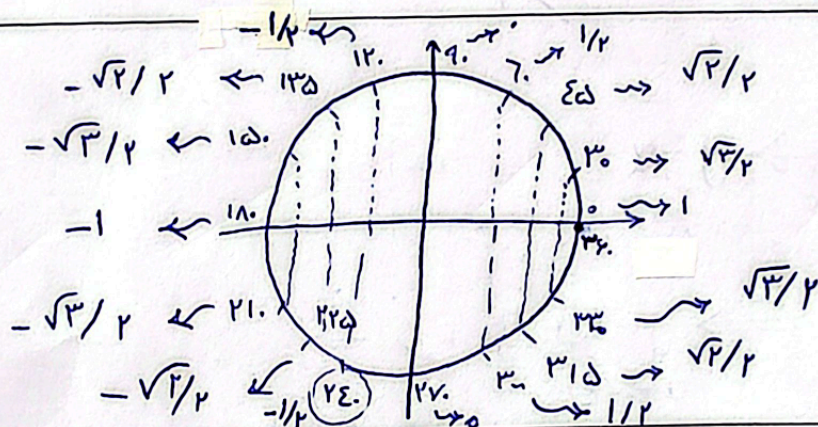
$$الف) y = \sqrt{6-x} + \sqrt{x-2} \Rightarrow \begin{cases} 6-x \geq 0 \Rightarrow x \leq 6 \\ x-2 \geq 0 \Rightarrow x \geq 2 \end{cases}$$

$$D_f = [2, 6]$$

$$ب) y = \frac{2x+1}{x^2+1} \quad D_f = \mathbb{R}$$

$$ج) y = \frac{2x+3}{|x|+x^2} \Rightarrow D_f = \mathbb{R} - \{0\}$$

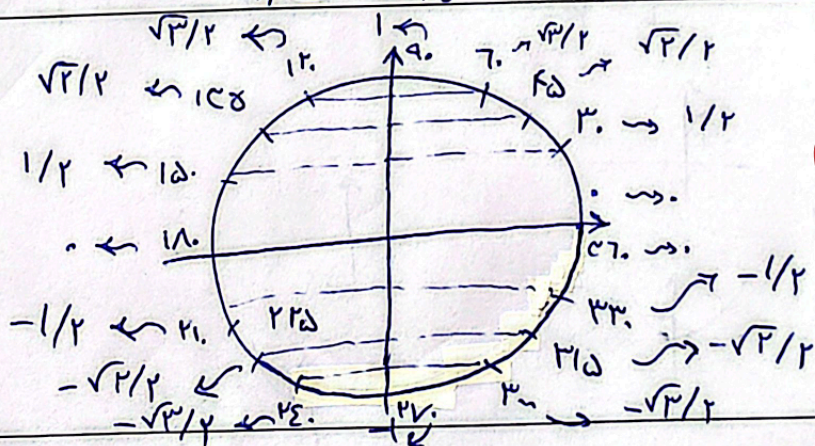
$$د) y = \frac{\sqrt{x-2}}{x-5} \Rightarrow \begin{cases} x-2 \geq 0 \Rightarrow x \geq 2 \\ x-5 \neq 0 \Rightarrow x \neq 5 \end{cases} \quad D_f = \mathbb{R} - \{5\} - (-\infty, 2)$$



Cos

5

1



Sin

5

9

$$-\cos \frac{7\pi}{6} = 1/2$$

$$\sin \frac{\pi}{7} = \frac{1}{2}$$

$$\sin \frac{5\pi}{7} = \frac{1}{2} \quad (الف)$$

$$-\cos \frac{11\pi}{6} = -\frac{\sqrt{3}}{2}$$

$$\sin \frac{4\pi}{3} = -\frac{\sqrt{3}}{2}$$

(ب)

10

$$\sin \frac{5\pi}{6} = \frac{\sqrt{3}}{2}$$