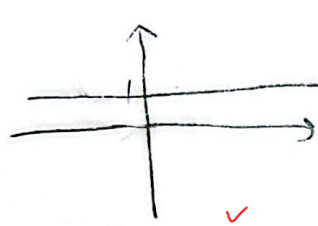
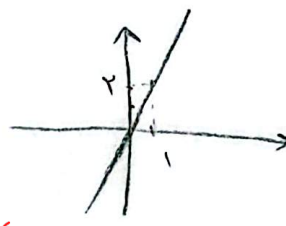
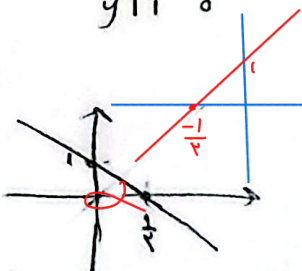
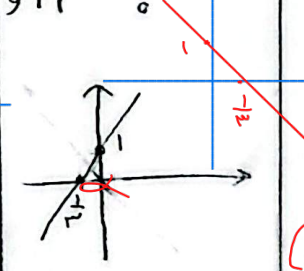
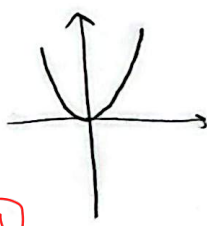
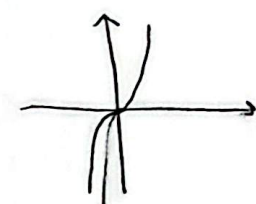
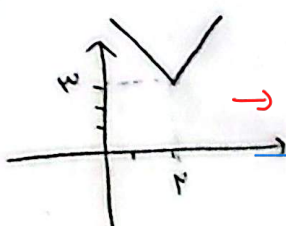
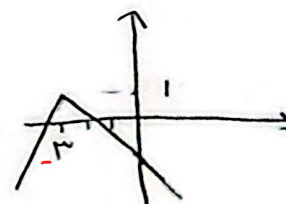


به دلیل تقدیر نام خانوادگی خود را مندرجاً بنویسید.

الف) تابع است $y_1^3 = 2x_1^2 + x_1$ $y_2^3 = 2x_2^2 + x_2$ $x_1 = x_2$ $\rightarrow y_1^3 = y_2^3$ $ y_1 = y_2 $	ب) تابع نیست $ y_1 = -x_1^2 + x_1 + 3$ $ y_2 = -x_2^2 + x_2 + 3$ $x_1 = x_2$ $ y_1 = y_2 $ $y_1 = \pm y_2$	ج) تابع است چون دو عدد مثبت جمعشون شده $ x_1 - 4 = 0$ $x_1 = 4$ $ y - 2 = 0$ $y = 2$	د) $x_1 = 0$ $y = \frac{\pi}{2} \text{ و } \frac{3\pi}{2}$ تابع نیست (۲) ✓	۱
الف) $y = k$ $y = 1$  ۱, ۵ ✓	$y = ax + b$ $y = 2x + b$ $2 = 2 + b$ $b = 0 \rightarrow y = 2x$  ✓	۲		
الف) $y = ax + b \rightarrow b = 0 \text{ و } a = 1$ $y = x$ $1 + 2(0) = 1$ ✓ ۲	ب) $y = x^2 + ax + b$ $a = -4$ $b = 0$ $1 \rightarrow \frac{-b - \sqrt{b^2 - 4ac}}{2a} = 2$ $-4 + 2 \times 0 = 4$ $-\frac{b^2 - 4ac}{4a} = 1 \rightarrow \frac{16 - 16c}{4} = 1 \rightarrow 4 - 4c = -4$ $c = 0$ ✓	۳		
الف) $\frac{x}{y} \mid \frac{1}{0}$ 	$\frac{x}{y} \mid \frac{-1}{0}$ 	$y = x^2$  (۱)	$y = x^3$ 	۴
الف) 	ب)  ۱, ۷, ۵ عرض از مبدأ نقطه شود	۵		

$\frac{n+1}{n(n-1)}$ $D_f = \mathbb{R} - \{0, 1\}$	$\frac{n+1}{n^2 - n + 1}$ $D_f = \mathbb{R}$	$\frac{n+1}{n^2 + n + 1}$ $D_f = \mathbb{R}$	$\frac{n+1}{n(n-1)(n+1)}$ $D_f = \mathbb{R} - \{0, 1, -1\}$	6
$y - n > 0$ $n \leq 4$ $(-\infty, 4]$ $n - 2 > 0$ $2 \leq n \rightarrow [2, +\infty)$ $D_f = [2, 4]$	$n^2 + 1 \neq 0$ $n^2 \neq -1$ $D_f = \mathbb{R}$	$n - 2 > 0$ $2 \leq n \rightarrow [2, +\infty)$ $n - 1 \neq 0$ $n \neq 1$ $D_f = [2, +\infty) - \{1\}$	$ n + n^2 \neq 0$ $D_f = \mathbb{R} - \{0\}$	7
				8
				9
الف) $\cos 120^\circ = -\frac{1}{2} \rightarrow \frac{1}{2}$ $\sin \alpha = \frac{1}{2}$ $\alpha = 30^\circ, 150^\circ$ ب) $\cos 330^\circ = \frac{\sqrt{3}}{2} \rightarrow -\frac{\sqrt{3}}{2}$ $\sin \alpha = -\frac{\sqrt{3}}{2}$ $\alpha = 210^\circ, 330^\circ$ $\alpha = \frac{\pi}{4} \text{ و } \frac{5\pi}{4}$ $\alpha = \frac{3\pi}{4} \text{ و } \frac{7\pi}{4}$				10