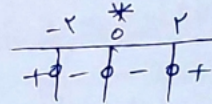


الف) $x^2 + x = 0 \rightarrow x(x+1) = 0 \rightarrow x = 0, -1 \rightarrow D_f = \mathbb{R} - \{0, -1\}$

ب) $\Delta = b^2 - 4ac \rightarrow \Delta = 1 - 16 = -15$ (منفی) $\rightarrow D_f = \mathbb{R}$

ج) $\Delta = 49 - 44 = 5$ (مثبت) $\rightarrow D_f = \mathbb{R}$



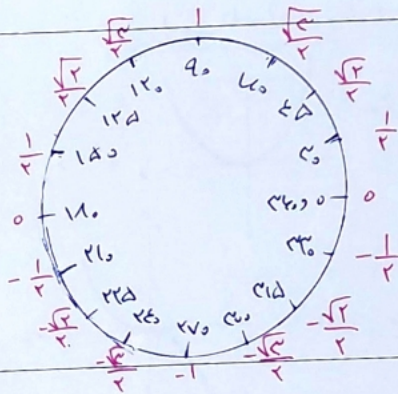
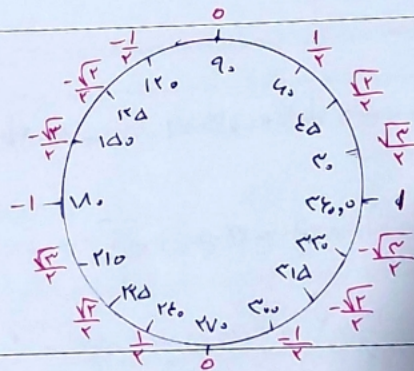
د) $x^2 - 4x^2 = 0 \rightarrow x^2(x^2 - 4) = 0 \rightarrow D_f = \mathbb{R} - \{\pm 2, 0\}$

الف) $x < 4, x > 2 \rightarrow D_f = 2 < x < 4 \rightarrow [2, 4]$

ب) $x^2 \geq 0$ (همیشه مثبت) $\rightarrow D_f = \mathbb{R}$

ج) $x > 4, x \neq 2 \rightarrow D_f = [2, +\infty) - \{2\}$

د) $x^2 \geq 0$ (همیشه مثبت) $\rightarrow D_f = \mathbb{R}$

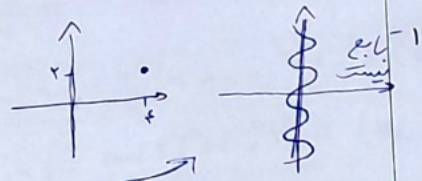


الف) $\cos \frac{2\pi}{3} \rightarrow \frac{1}{2} \Rightarrow \sin 0^\circ, \sin 150^\circ \rightarrow \sin \frac{\pi}{4}, \sin \frac{3\pi}{4}$

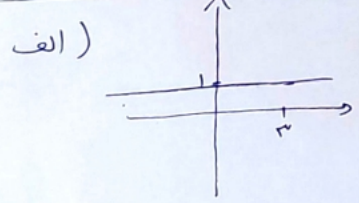
ب) $\cos \frac{11\pi}{4} \rightarrow \frac{\sqrt{2}}{2} \Rightarrow \sin 45^\circ, \sin 135^\circ \rightarrow \sin \frac{\pi}{4}, \sin \frac{3\pi}{4}$

نام و نام خانوادگی مهسا کریمی پاسخنامه تشریحی تکلیف شماره ۳۰۰ کلاس دوم (جمع)

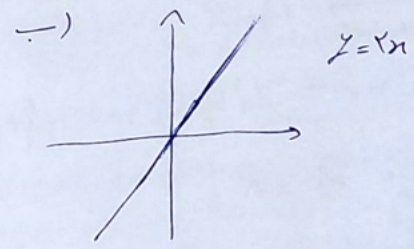
الف) $y^3 - x = 2x^2 \xrightarrow{x_1 = x_2} y_1^3 - x_1 = 2x_1^2 \rightarrow y_1^3 - x_1 - 2x_1^2 = y_2^3 - x_2 - 2x_2^2 \rightarrow y_1^3 - x_1 - 2x_1^2 = y_2^3 - x_2 - 2x_2^2 \rightarrow y_1 = y_2$ تابع
 ب) $|y| + x^2 = x + 3 \xrightarrow{x=0} |y| = 3 \rightarrow y = \pm 3$ تابع نیست
 ج) $\sqrt{x-4} + |y-2| = 0$ فقط وقتی می توانیم که $x=4$ و $y=2$ را بگیریم آنگاه صفتی می شود که قابل قبول نیست



د) $x = \cos y$



$y=1$



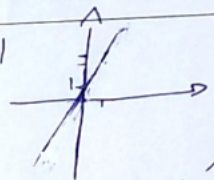
$y=2x$

الف) تابع جابجایی $\rightarrow b=0, a=1 \rightarrow a+2b=1+0=1$

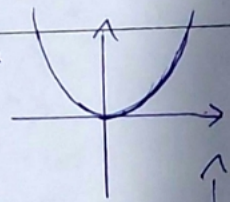
$$a = \frac{1}{4} \rightarrow a+2b = \frac{1}{4} + 2\left(-\frac{3}{4}\right) = \frac{-11}{4}$$

ب) $\frac{-a}{2b} \rightarrow \frac{-1}{2 \cdot \frac{3}{4}} = \frac{-1}{\frac{3}{2}} = -\frac{2}{3} \rightarrow a = -1 \rightarrow a = \frac{1}{4} \Rightarrow 1 = \frac{1}{4} + \left(-\frac{2}{3}\right)(2) + b \rightarrow b = \frac{-1}{4}$

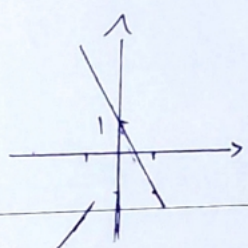
الف) $y = 2x + 1$



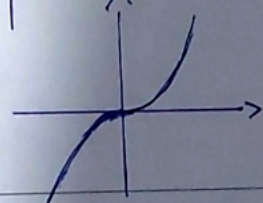
ج) $y = x^2$



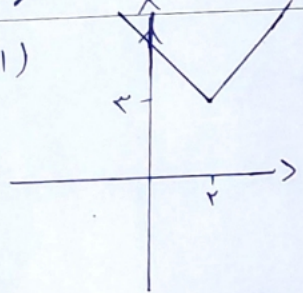
ب) $y = -2x + 1$



د) $y = x^3$



الف)



ب)

