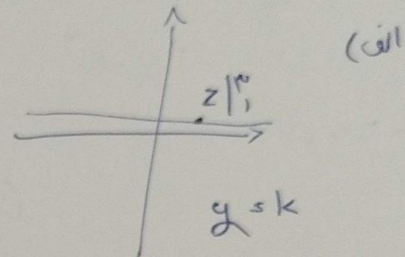
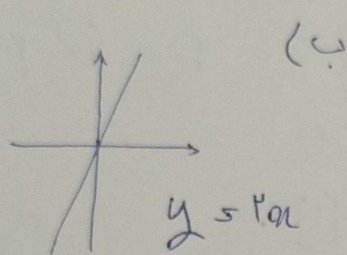
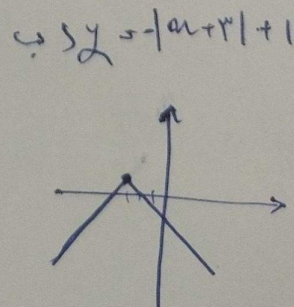
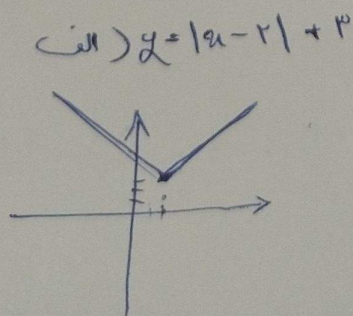
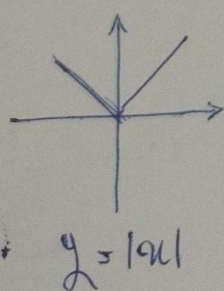
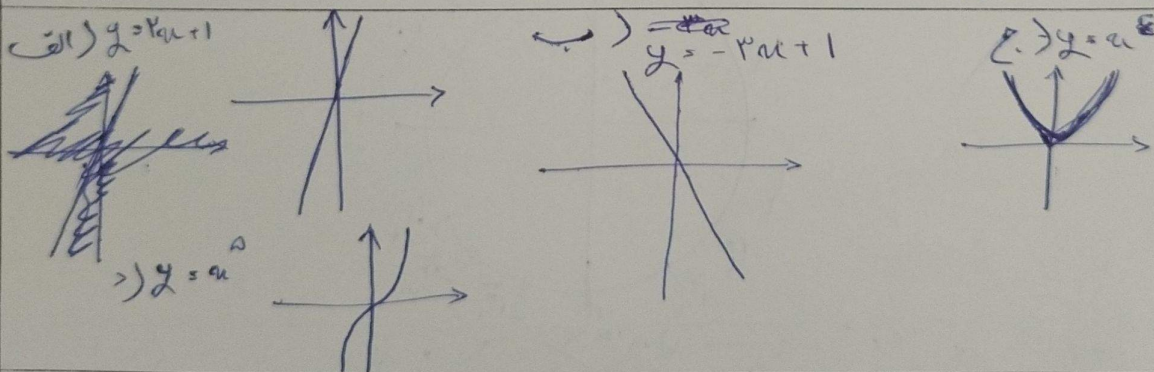


$y'' - a = 2a^2$ تابع (الف) $|y| + a^2 = a_1 + 3$ (ب) $\sqrt{a^2 - 1} + |y - 2| = 0$ (ج) $a = \cos y$
 $y'' + 2a^2 - a_1 = 0$ $a = 0 \rightarrow |y| = 3$ تابع $\sqrt{a^2 - 1} + |y - 2| = 0$ $a = \cos y$
 $y_1'' + 2a_1^2 - a_1 = 0$ $y = 3$ $a = 2$ $\frac{\pi}{2}$ $\frac{3\pi}{2}$
 $y_2'' + 2a_2^2 - a_2 = 0$ $\frac{1}{2} \rightarrow$ تابع $\frac{\pi}{2}$ $\frac{3\pi}{2}$
 $y_2'' + 2a_2^2 - a_2 = y_1'' + 2a_1^2 - a_1 \rightarrow y_2'' + y_1'' \rightarrow y_2 = y_1$



$y = aa + b \rightarrow dy = a \rightarrow a = 1 \quad b = 0 \rightarrow a + 2b = 1 + 0 = 1$ (الف)

$y = a^2 + aa + b$ $a + 2b = \frac{1}{2} + 1 = \frac{3}{2} \rightarrow a = \frac{3}{2}$ (ب)
 $\rightarrow \frac{1}{2}$ $-b = \frac{1}{2}a \quad b = -\frac{1}{2}a$
 $1 = \frac{1}{2} + 2a + b \rightarrow 2a + b = -\frac{1}{2} \rightarrow \frac{-b}{2a} = \frac{1}{2} \rightarrow a = \frac{3}{2}$



$$y = \frac{a + \varepsilon}{a^2 - \varepsilon a} \quad (\text{الف}) \quad y = \frac{a + \varepsilon}{a^2 - \sqrt{a} + 1} \quad (\text{ب}) \quad y = \frac{a + \varepsilon}{a^2 + a + \varepsilon} \quad (\text{ج}) \quad y = \frac{a + \varepsilon}{a^2 - \varepsilon a^2} \quad (\text{د})$$

$a(a - \varepsilon) \neq 0$
 $D_f = \mathbb{R} - \{0, \varepsilon\}$
 $D_f = \mathbb{R}$

$\Delta = b^2 - 4ac$
 $\Delta = 1 - 4$
 $\Delta = -3$
 $D_f = \mathbb{R}$

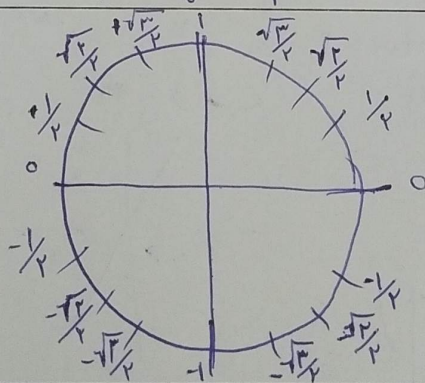
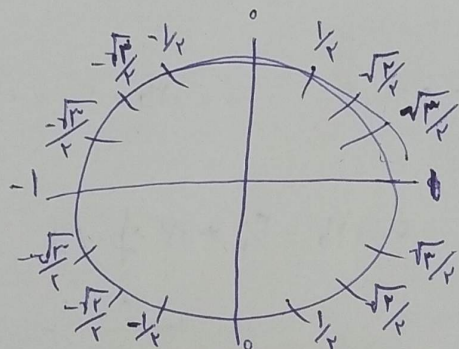
$a^2 - \varepsilon a^2 \neq 0$
 $a^2(a - \varepsilon) \neq 0$
 $D_f = \mathbb{R} - \{0, \varepsilon, -\varepsilon\}$

$$y = \sqrt{1 - a} + \sqrt{a - 1} \quad (\text{الف}) \quad y = \frac{a + 1}{a^2 + 1} \quad (\text{ب}) \quad y = \frac{a + 1}{a^2 + a + 1} \quad (\text{ج}) \quad y = \frac{a + 1}{a^2 + a + 1} \quad (\text{د})$$

$1 - a \geq 0 \quad a - 1 \geq 0$
 $a \leq 1 \quad a \geq 1$
 $a = 1$
 $D_f = \mathbb{R}$

$a - \varepsilon \neq 0$
 $a \neq \varepsilon$
 $a - \varepsilon \geq 0$
 $a \geq \varepsilon$
 $D_f = [1 + \infty) - \{\varepsilon\}$

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



$$\frac{5\pi}{6} = 150^\circ \quad \cos 150^\circ = -\frac{1}{2} \quad \sin 150^\circ = \frac{1}{2} \rightarrow \sin \frac{5\pi}{6} = \frac{1}{2}, \cos \frac{5\pi}{6} = -\frac{1}{2} \quad (\text{الف})$$

$$\frac{11\pi}{6} = 330^\circ \quad \cos 330^\circ = \frac{\sqrt{3}}{2} \quad \sin 330^\circ = -\frac{1}{2} \rightarrow \sin \frac{11\pi}{6} = -\frac{1}{2}, \cos \frac{11\pi}{6} = \frac{\sqrt{3}}{2} \quad (\text{ب})$$