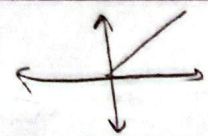


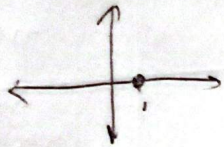
$$F = \{(1, 4a), (1, a^2), (2, 2a)\}$$

$$a^2 + 2 = 4a$$

$$a^2 - 4a + 2 = 0$$

$$(a-1)(a-2) = 0 \rightarrow \begin{cases} a=2 \\ a=1 \end{cases}$$

الف) $|y| = |x|$  تابع هست

ب) $|y| + \sqrt{x-1} = 0$  تابع هست

الف) $|y-1| = \sqrt{x-2}$

$x=2 \rightarrow |y-1|=0 \rightarrow y=1$

ج) $\sin^2 x + \cos^2 y = 1$

$x=0 \rightarrow \sin^2 0 + \cos^2 y = 1 \rightarrow \cos^2 y = 1 \rightarrow y = 0, \pi, 2\pi, \dots$

ب) $y^4 - y = \frac{x^2}{2}$ $x=0 \rightarrow$

$y(y^3 - 1) = \frac{x^2}{2} \rightarrow y(y-1)(y^2+y+1) = \frac{x^2}{2}$

الف) $x^2 + |y-1| = 4$

$x=1 \rightarrow |y-1| = 3 \rightarrow y = 4, -2$

د) $2xy = x$ $x=0 \rightarrow 0=0$ $x \neq 0 \rightarrow 2y = 1 \rightarrow y = \frac{1}{2}$

ب) $y^4 + 3x = 0$

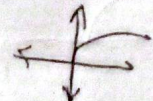
$y_1^4 + 3x = 0$

$y_2^4 + 3x = 0$

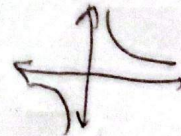
$x_1 = x_2, y_1^4 = y_2^4 \rightarrow y_1 = y_2$

تابع هست

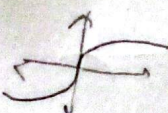
الف) $y = \sqrt{x}$



ج) $y = \frac{1}{x^2}$



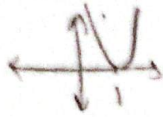
ب) $y = \sqrt{x}$



د) $y = \frac{1}{x^2}$



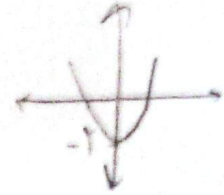
1) $y = (x-1)^2$



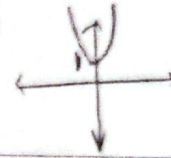
2) $y = (x+2)^2$



3) $y = x^2 - 2$



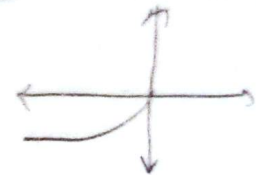
4) $y = x^2 + 1$



5) $y = -\sqrt{x}$



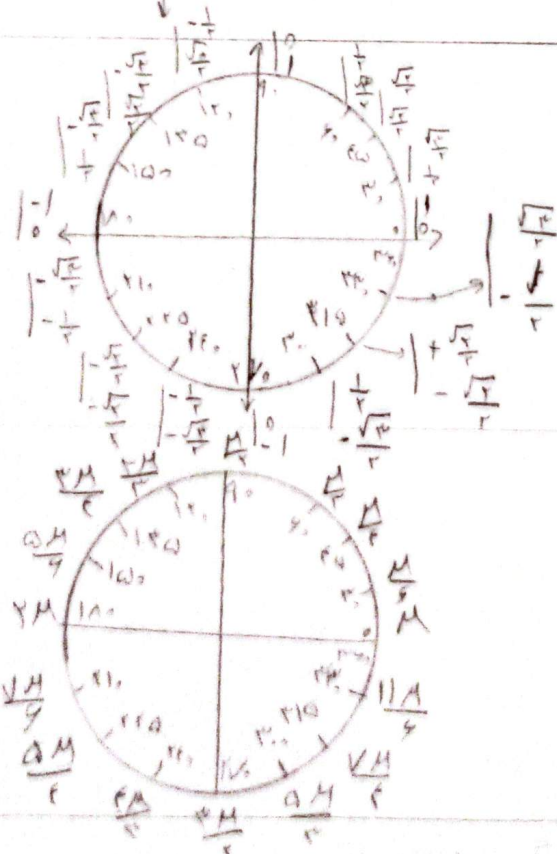
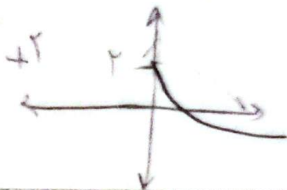
6) $y = -\sqrt{-x}$



7) $y = \sqrt{-x}$



8) $y = -\sqrt{x} + 2$



9) $-\frac{1}{x}$

10) $\frac{1}{x}$

11) $\frac{1}{x}$

12) $-\frac{1}{x}$