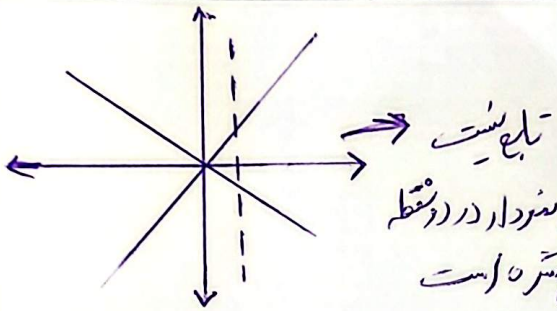


$$F = \{ (1, a^2+3), (2, 3a) \}$$

$$a^2+3=3a \Rightarrow a^2+3-3a=0 \Rightarrow (a-3)(a-1)=0 \Rightarrow a \in \{1, 3\}$$



چون مجموع در مرتبه صفر شده است
پس عدد عبارت صفر هست
 $|y|=0 \Rightarrow y=0$
 $\sqrt{x-1}=0 \Rightarrow x=1$
 $u=1$

الف) $|y-1| = \sqrt{x-2} \xrightarrow{x=2} |y-1| = \sqrt{2-2} \Rightarrow |y-1|=0 \Rightarrow y=1$

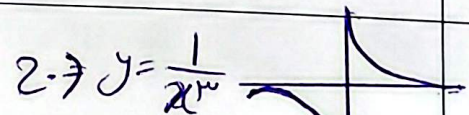
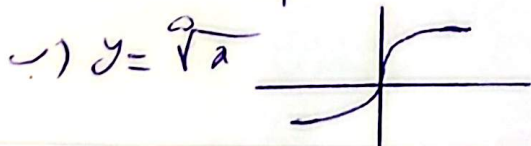
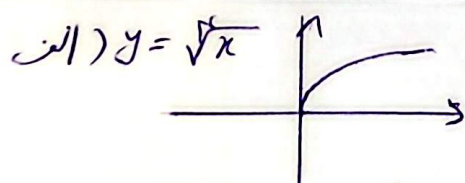
ب) $y^2 - y = \frac{x^2}{4} \xrightarrow{x=0} y^2 - y = 0 \Rightarrow y(y-1)=0 \Rightarrow y=0 \Rightarrow \boxed{y=0}$

ج) $\sin^2 u + \cos^2 \frac{y}{4} = 1 \xrightarrow{x=0} \sin^2 \frac{x}{4} + \cos^2 \frac{y}{4} = 1 \Rightarrow \cos^2 \frac{y}{4} = 0 \Rightarrow \frac{y}{4} = \frac{\pi}{2} \Rightarrow y = 2\pi$

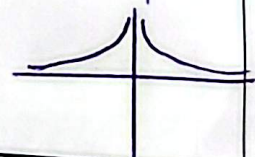
د) $2xy = 2 \xrightarrow{x=0} 2 \times 0 \times y = 0 \Rightarrow y = 1 \Rightarrow \boxed{y=1}$

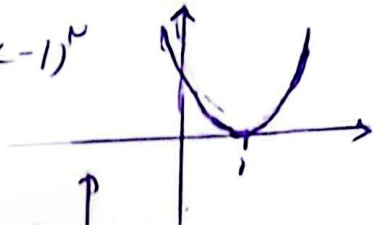
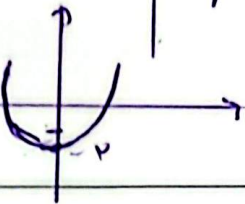
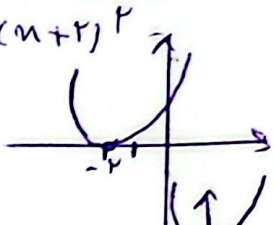
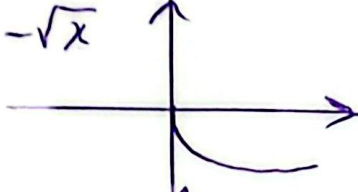
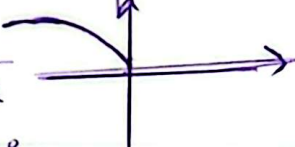
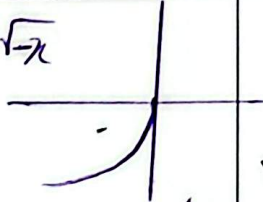
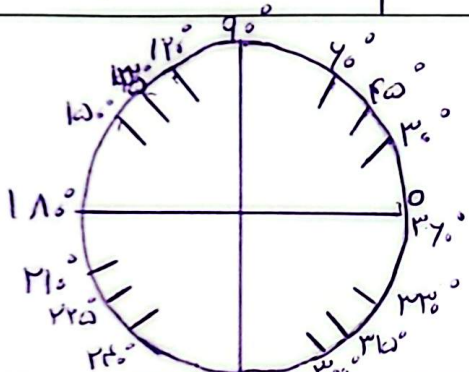
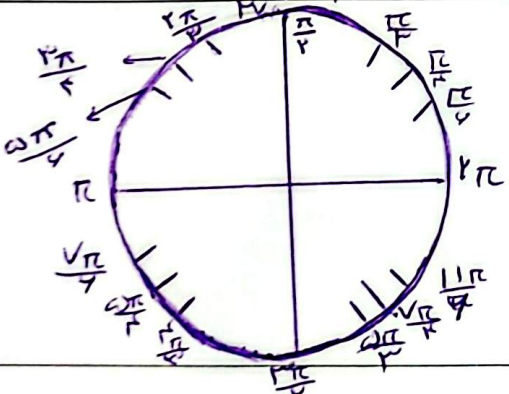
الف) $x^2 + |y-1| = 4x \xrightarrow{x=1} 1 + |y-1| = 4 \Rightarrow |y-1| = 3 \Rightarrow y-1=3 \Rightarrow y=4$
 $y-1=-3 \Rightarrow y=-2$

ب) $y_1^2 = -3x \Rightarrow y_1^2 = y_2^2 \Rightarrow y_1 = y_2 \Rightarrow \text{تابع است}$



د) $y = \frac{1}{x^3}$



الف) $y = (x-1)^2$  ج) $y = x^2 - 2$ 	ب) $y = (x+2)^2$  د) $y = x^2 + 1$ 	٦
الف) $y = -\sqrt{x}$  ب) $y = \sqrt{-x}$ 	ج) $y = -\sqrt{-x}$  د) $y = \sqrt{x+1}$ 	٧
		٨
		٩
الف) $\cos 120^\circ = -\frac{1}{2}$ ب) $\sin 150^\circ = \frac{1}{2}$ ج) $\cos \frac{5\pi}{3} = \frac{1}{2}$ د) $\sin \frac{11\pi}{6} = -\frac{1}{2}$		١٠