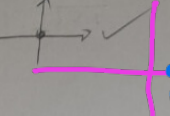


$f = \{(1, 4a), (1, a^2 + 2), (2, 3a)\}$

$4a = a^2 + 2 \xrightarrow{a=1} 4 \cdot 1 = 1^2 + 2 \rightarrow 4 = 3$
 $4a = a^2 + 2 \xrightarrow{a=2} 4 \cdot 2 = 2^2 + 2 \rightarrow 8 = 6$

$a = 1 \text{ و } 2$

الف) $|y| = |x|$  $\times$ $|y| = |x| \rightarrow y = \pm x$

ب) $|y| = \sqrt{x-1} = 0 \rightarrow$  $\checkmark$ **همه جوابات متعلق معادله هستند.**

الف) $|y-1| = \sqrt{x-2} \xrightarrow{x=3} |y-1| = 1 \rightarrow y = 0 \text{ و } 2$
 ب) $y^2 - y = \frac{x^2}{4} \xrightarrow{x=0} y^2 - y = 0 \rightarrow y(y-1) = 0 \rightarrow y = 0 \text{ و } 1$

ج) $\sin^2 x + \cos^2 \frac{y}{2} = 1 \xrightarrow{x=0} \cos^2 \frac{y}{2} = 1 \rightarrow y = 0 \text{ و } 2\pi$ **(۱۰۷۵)**

د) $2xy = x \xrightarrow{x=0} 0 = 0$ $x \neq 0 \rightarrow y = \frac{1}{2}$
 الف) $x^2 + |y-1| = 4x \rightarrow |y-1| = 4x - x^2 \rightarrow x = 1$
 $|y-1| = 3 \rightarrow y = -2 \text{ و } 4$ تابع نیست

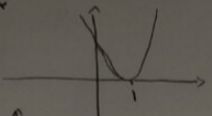
ب) $y^2 + 2x = 0 \rightarrow y^2 = -2x$
 $y_1 = -\sqrt{2x}$ $y_2 = \sqrt{2x}$ تابع هست $y_1 = y_2 \rightarrow y = \sqrt{2x}$

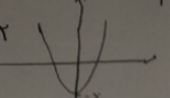
الف) $y = \sqrt{x} \rightarrow$ 

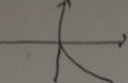
ب) $y = \sqrt{x} \rightarrow$ 

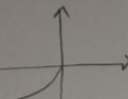
ج) $y = \frac{1}{x^2} \rightarrow$ 

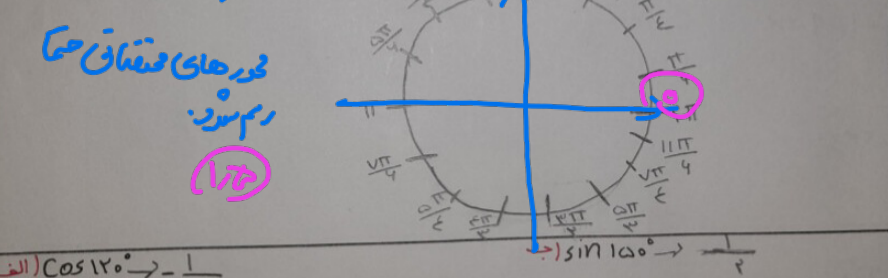
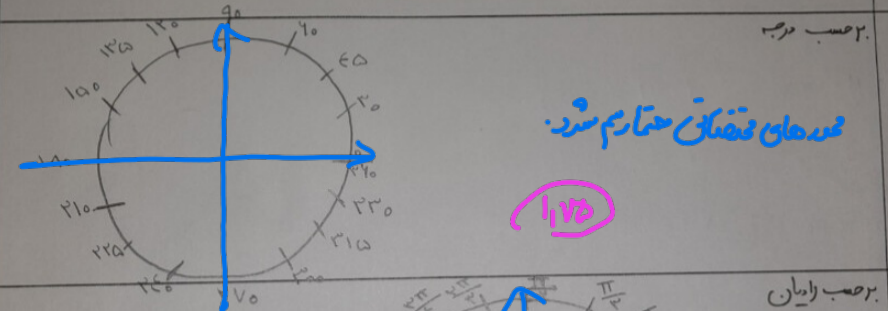
د) $y = \frac{1}{x^2} \rightarrow$ 

الف) $y = (x-1)^2$ 

ج) $y = x^2 - 2$  **(۲) ✓**

الف) $y = -\sqrt{x}$ 

ج) $y = -\sqrt{x}$  **(۳) ✓**



الف) $\cos 120^\circ \rightarrow -\frac{1}{2}$

ج) $\cos \frac{5\pi}{3} \rightarrow \frac{1}{2}$ **(۲) ✓**

د) $\sin \frac{11\pi}{4} \rightarrow -\frac{1}{2}$