

$$fa = a^2 + 3 \Rightarrow fa - a^2 = 3$$

(۱) $a(f-a) = 3 \Rightarrow a=1 \rightarrow (1,4)(1,4)(2,3)$

$a^2 - fa + 3 = 0 \rightarrow (a-1)(a-3) = 0 \rightarrow a=1$ تابع هست ✓
 $a=3$

الف) $y = x$ یا $y = -x$



تابع نیست

ب) $|y| + \sqrt{x-1} = 0$



تابع است ✓

$|y| = 0 \Rightarrow y = 0$ $\sqrt{x-1} = 0 \Rightarrow x = 1$

الف) $|y-1| = \sqrt{x-2} \xrightarrow{x=2} |y-1| = 2 \Rightarrow \begin{cases} y-1 = 2 \\ y-1 = -2 \end{cases} \Rightarrow \begin{cases} y=3 \\ y=-1 \end{cases}$ تابع نیست

ب) $y^3 - y = \frac{x^2}{4} \xrightarrow{x=0} y^3 - y = 0 \Rightarrow y = 0 \Rightarrow \begin{cases} y=1 \\ y=-1 \end{cases}$ تابع نیست

ج) $\sin^2 x + \cos^2 \frac{y}{4} = 1 \xrightarrow{x=0} \cos^2 \frac{y}{4} = 1 \Rightarrow \begin{cases} y=1 \\ y=-1 \end{cases}$ تابع نیست

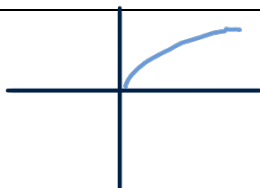
د) $2xy = x \xrightarrow{x=0} y$ بی نهایت جواب دارد

تابع نیست

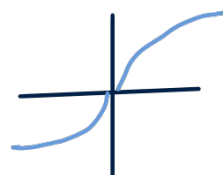
الف) $|y-1| = x(f-x) \xrightarrow{x=1} |y-1| = 3 \Rightarrow \begin{cases} y-1 = 3 \\ y-1 = -3 \end{cases} \Rightarrow \begin{cases} y=4 \\ y=-2 \end{cases}$ تابع نیست

ب) $y^3 + 3x = 0 \xrightarrow{x_1=x_2} \begin{cases} y_1^3 + 3x_1 = 0 \\ y_2^3 + 3x_2 = 0 \end{cases} \Rightarrow \begin{cases} y_1 = 0 \\ y_2 = 0 \end{cases} \Rightarrow y_1 = y_2 \Rightarrow y = y$ تابع است ✓

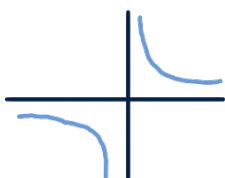
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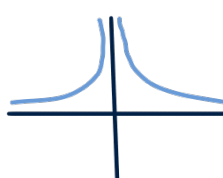
ب)



ج)

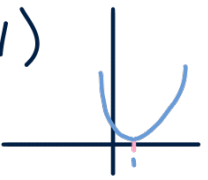
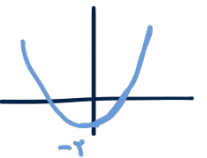
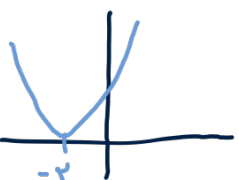
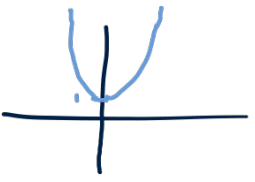
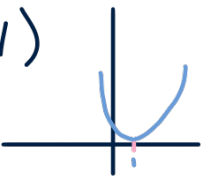
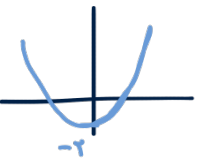
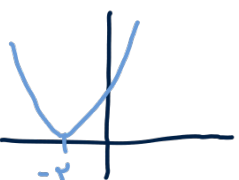
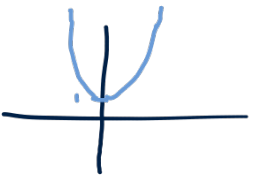
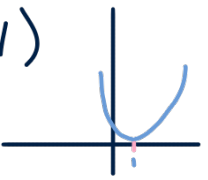
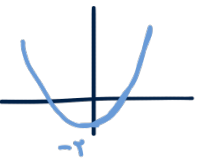
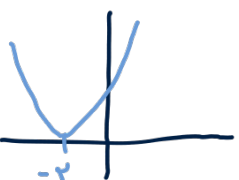
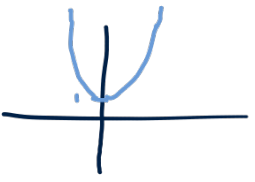
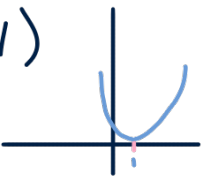
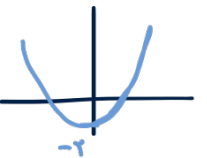
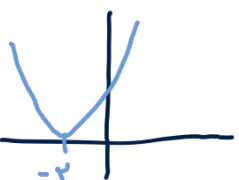
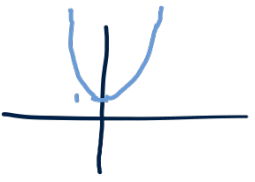
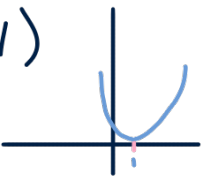
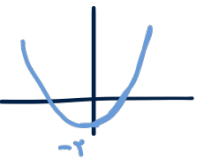
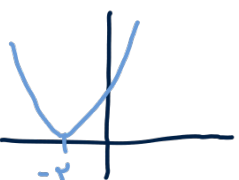
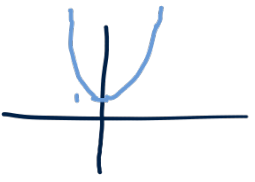
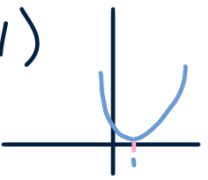
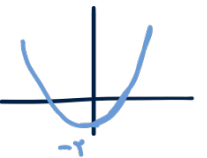
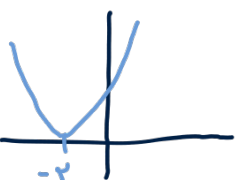
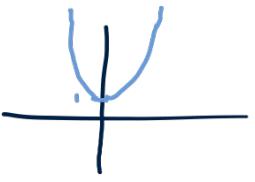
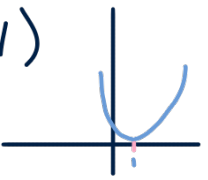
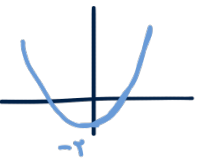
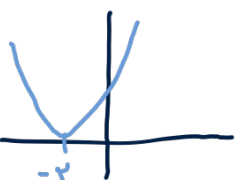
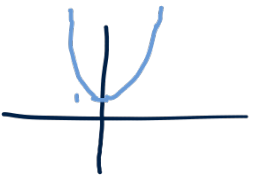
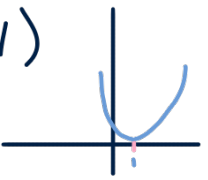
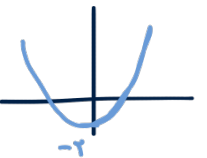
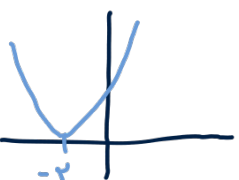
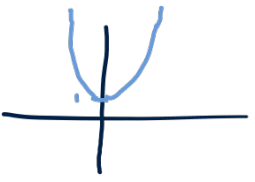
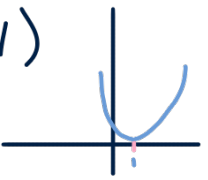
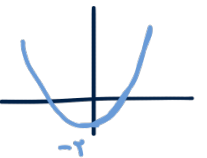
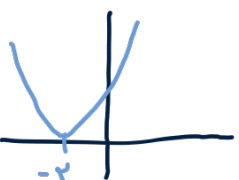
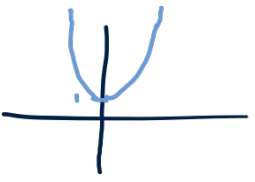
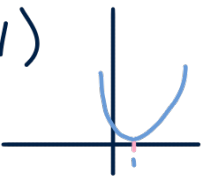
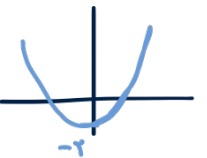
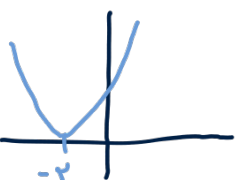
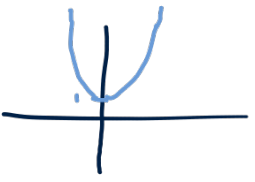
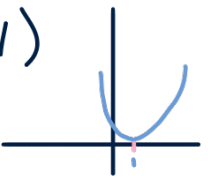
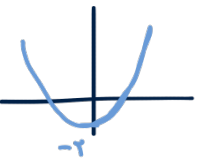
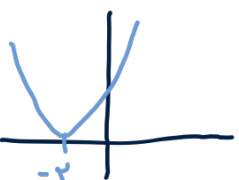
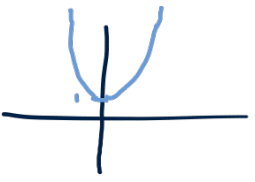
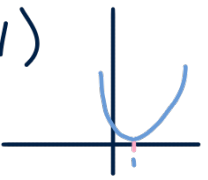
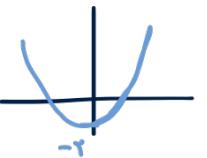
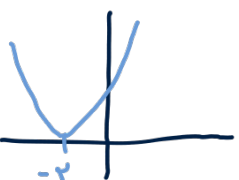
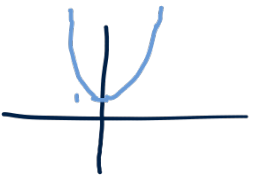
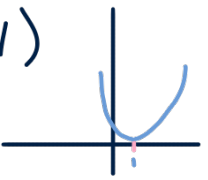
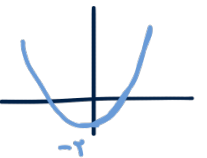
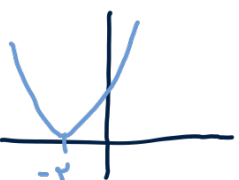
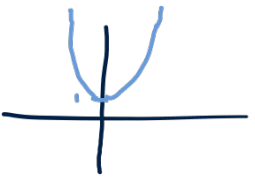
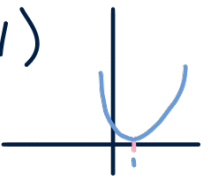
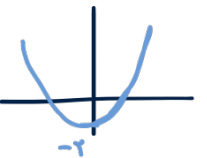
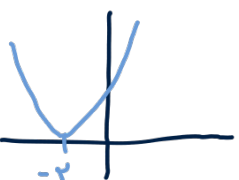
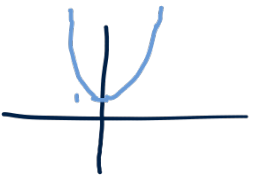
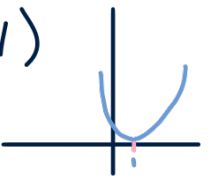
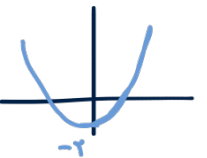
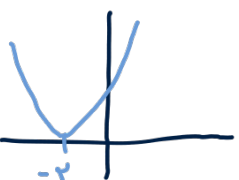
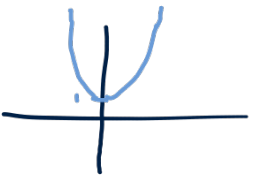
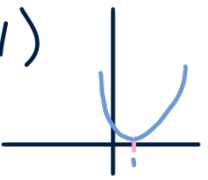
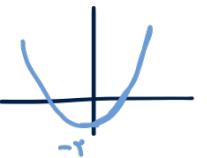
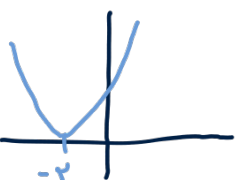
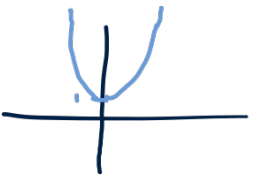
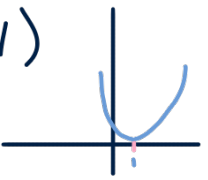
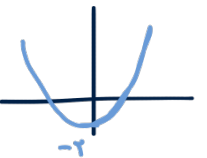
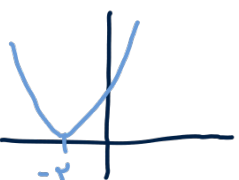
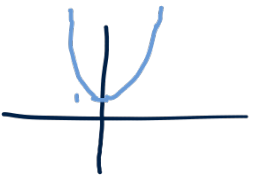
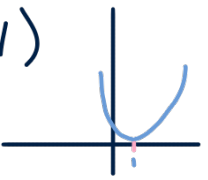
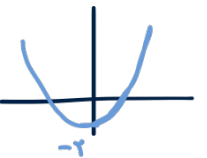
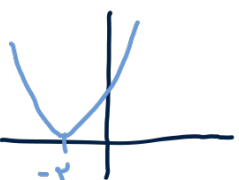
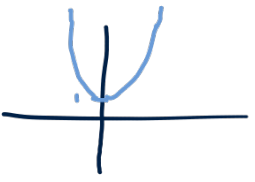
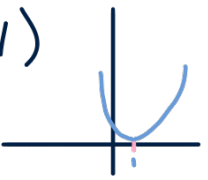
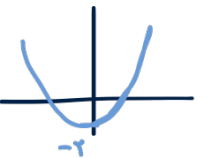
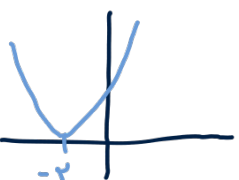
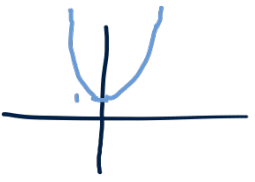
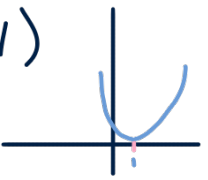
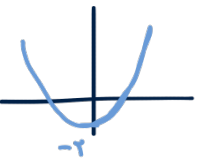
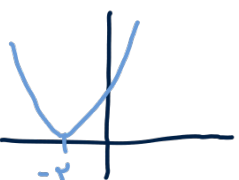
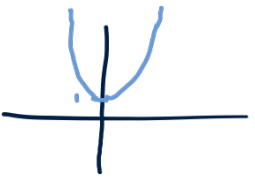
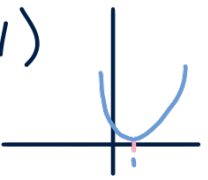
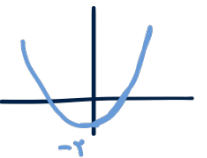
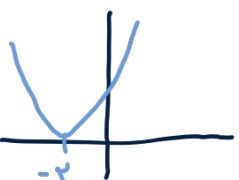
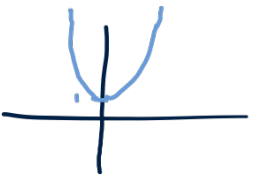
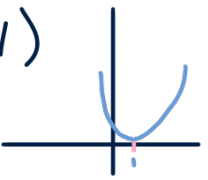
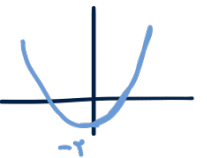
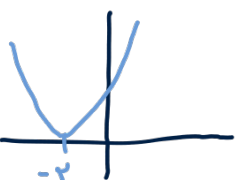
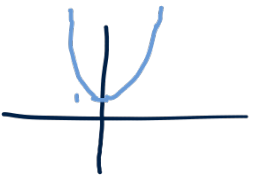
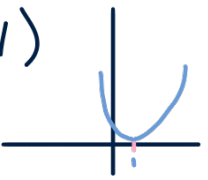
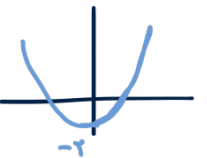
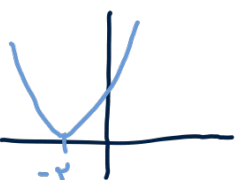
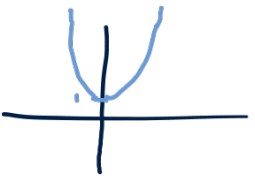
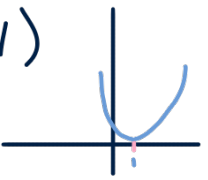
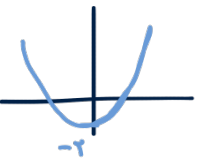
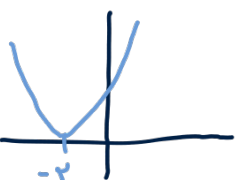
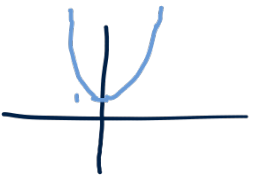
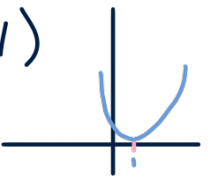
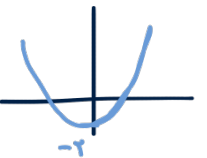
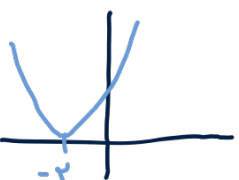
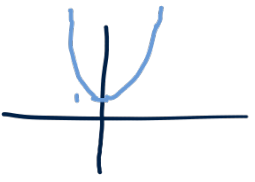
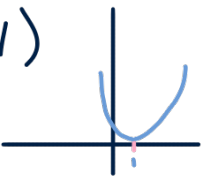
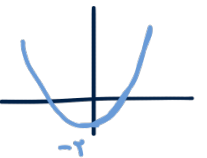
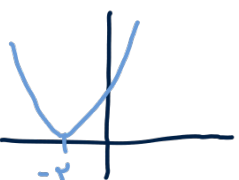
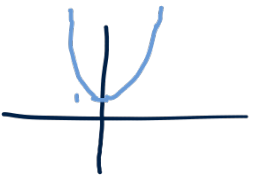
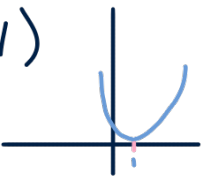
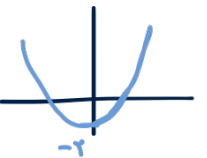
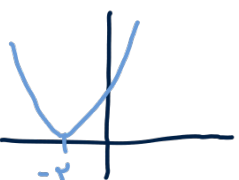
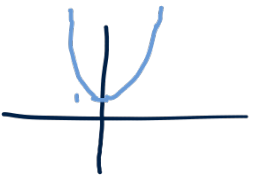
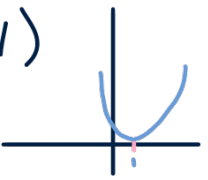
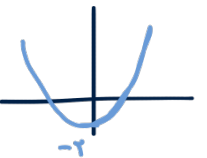
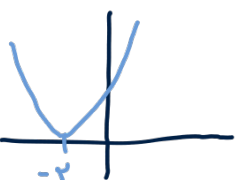
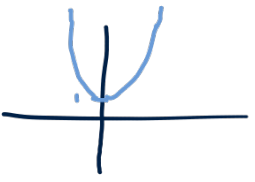
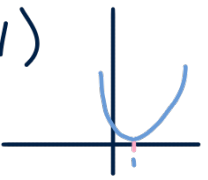
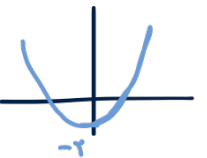
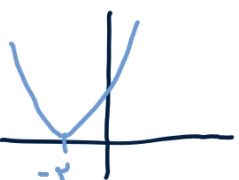
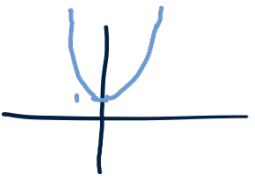
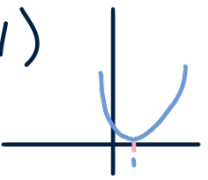
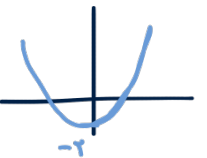
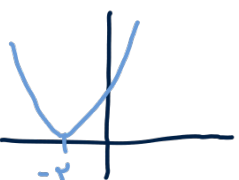
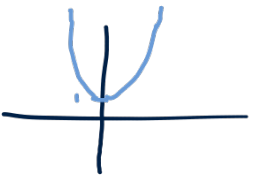
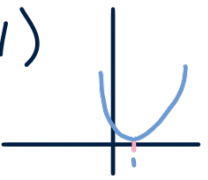
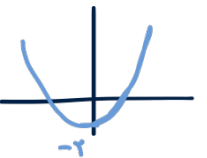
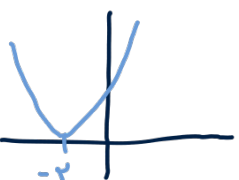
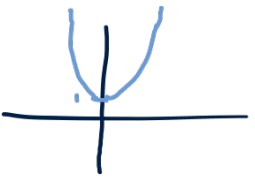
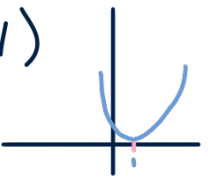
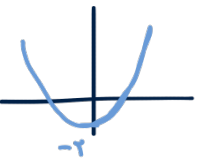
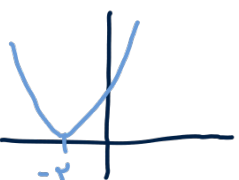
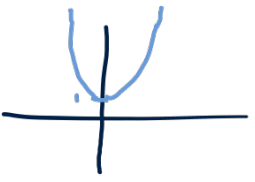
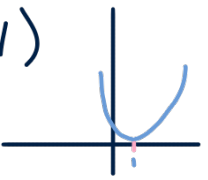
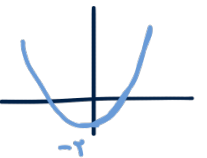
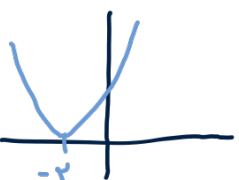
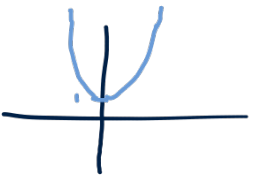
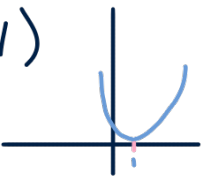
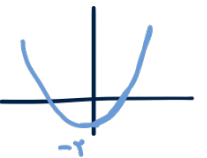
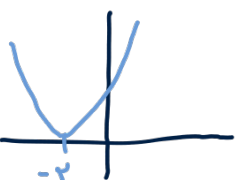
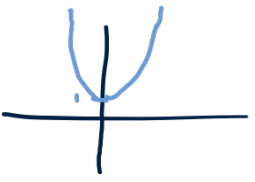
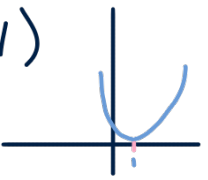
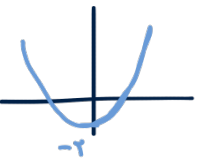
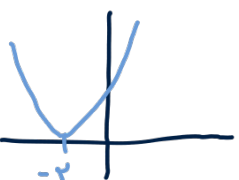
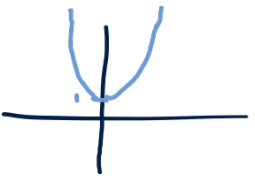
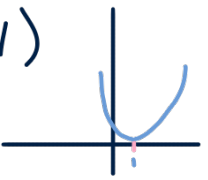
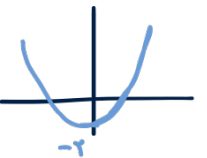
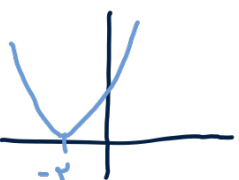
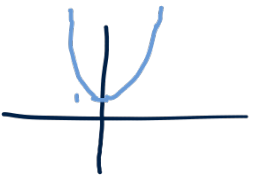
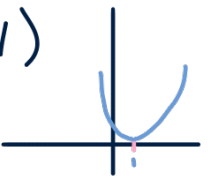
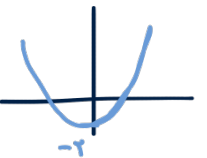
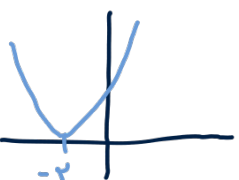
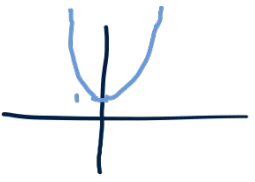
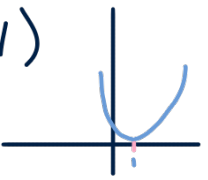
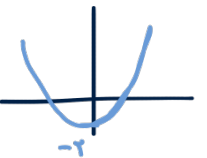
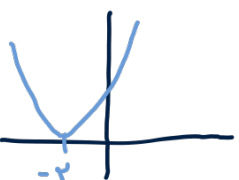
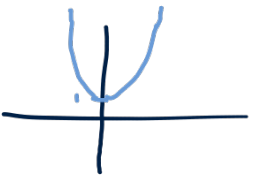
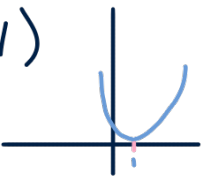
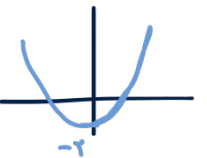
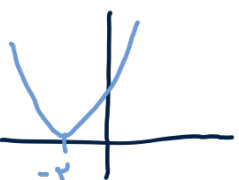
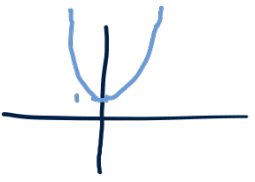
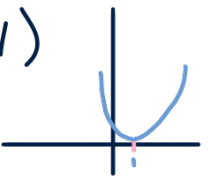
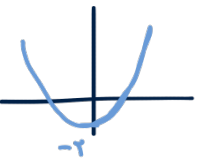
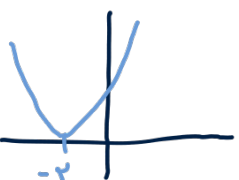
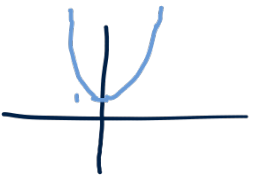
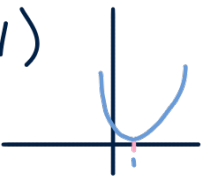
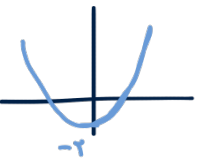
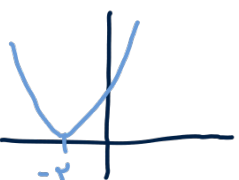
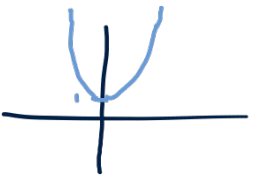
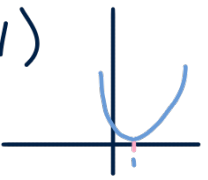
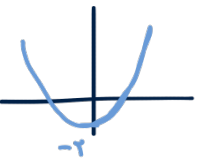
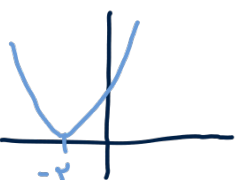
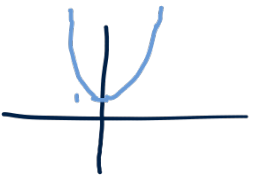
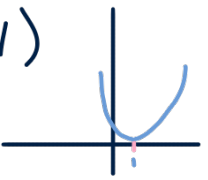
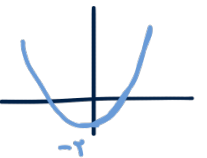
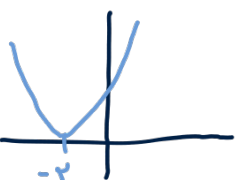
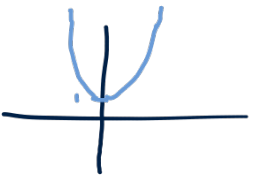
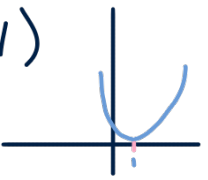
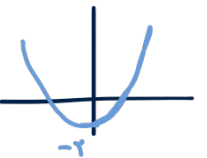
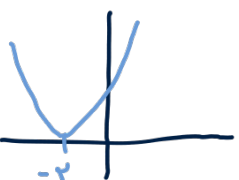
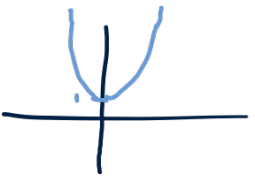
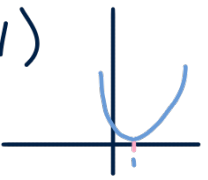
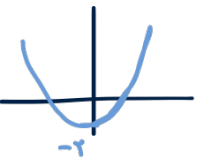
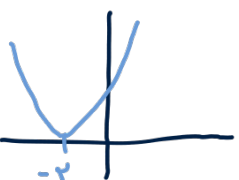
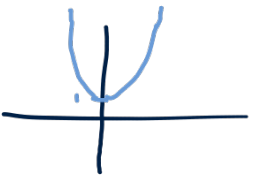
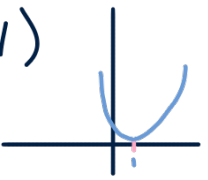
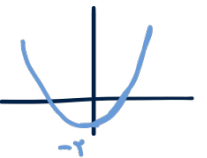
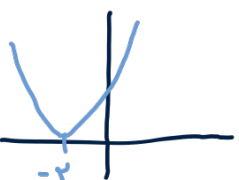
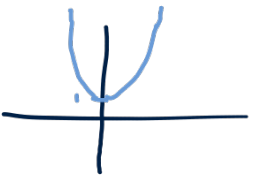
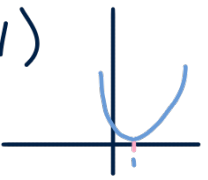
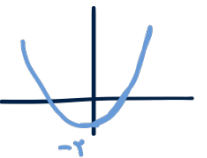
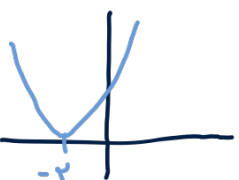
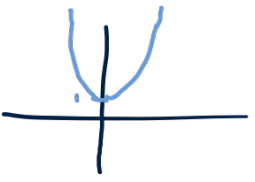
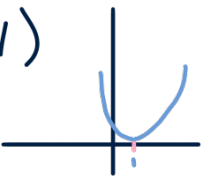
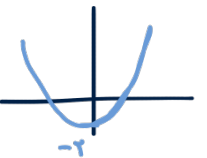
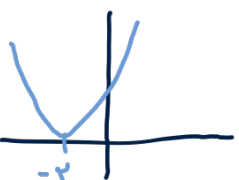
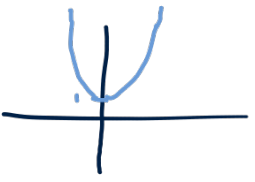
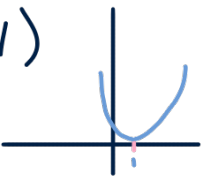
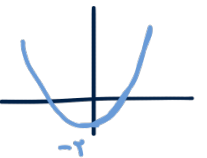
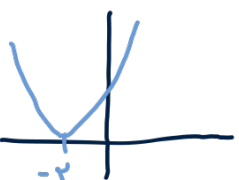
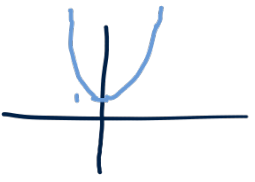
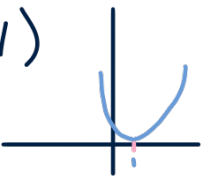
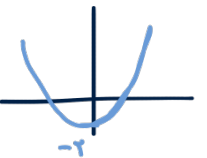
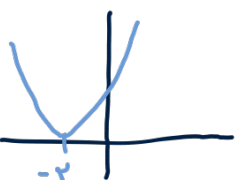
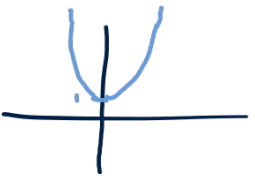
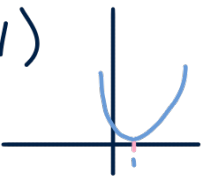
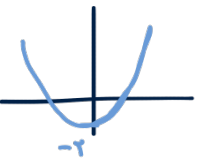
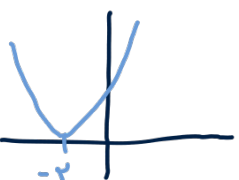
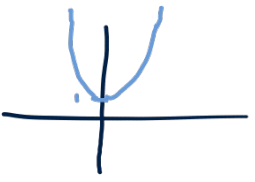
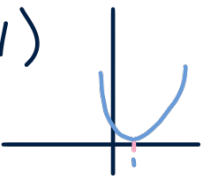
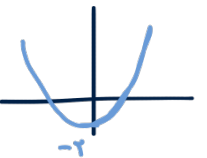
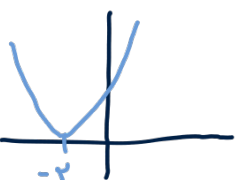
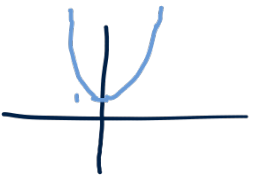
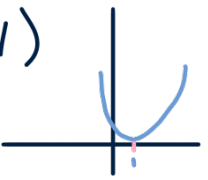
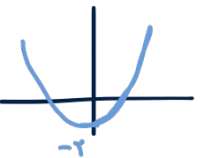
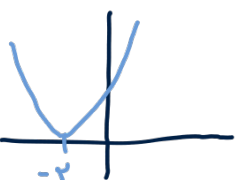
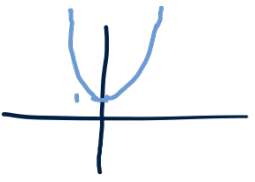
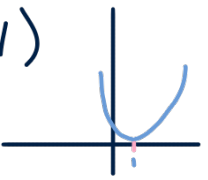
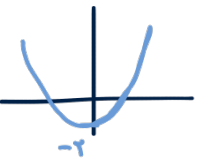
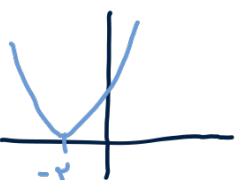
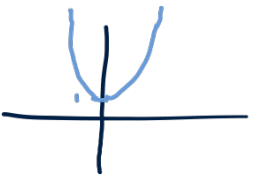
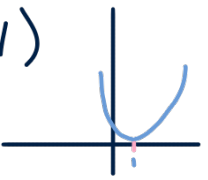
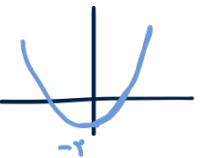
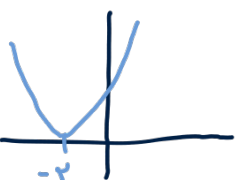
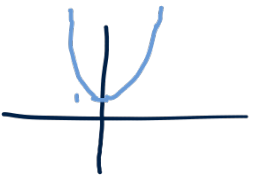
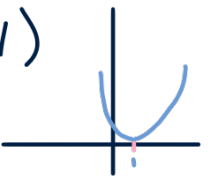
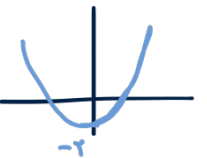
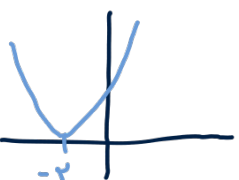
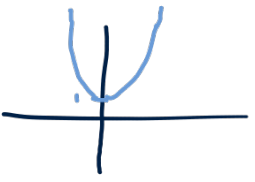
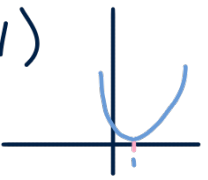


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