

$$f(x) = 3x \ln(ax)$$

$$a > 0$$

5 -> 100

$$x = \frac{1}{3e} \quad |13'2$$

$$f'(x) = 3 \ln(ax) + 3x \cdot \frac{a}{ax}$$

$$f'(x) = 3 \ln(ax) + 3$$

$$0 = 3(\ln(ax) + 1) \quad | :3$$

$$x = \frac{1}{3e} \quad |13'1$$

$$0 = \ln\left(\frac{a}{3e}\right) + 1$$

$$\ln\left(\frac{a}{3e}\right) = -1$$

$$\frac{a}{3e} = \frac{1}{e} \quad | \cdot 3e$$

$$\boxed{a=3}$$

! y=0 תחת x=1/3

$$ax > 0$$

$$\boxed{x > 0}$$

! 2'5

①

②

$$y=0 \quad | \quad \underline{x=0 \text{ תחת } 100} \quad \text{③}$$

$$0 = 3x \ln(3x)$$

$$x \neq 0$$

$$\boxed{x = \frac{1}{3}}$$

$$\left(\frac{1}{3}, 0\right)$$

$$f\left(\frac{1}{3e}\right) = \frac{1}{e} \cdot \ln\left(\frac{1}{e}\right) = -\frac{1}{e}$$

⑤

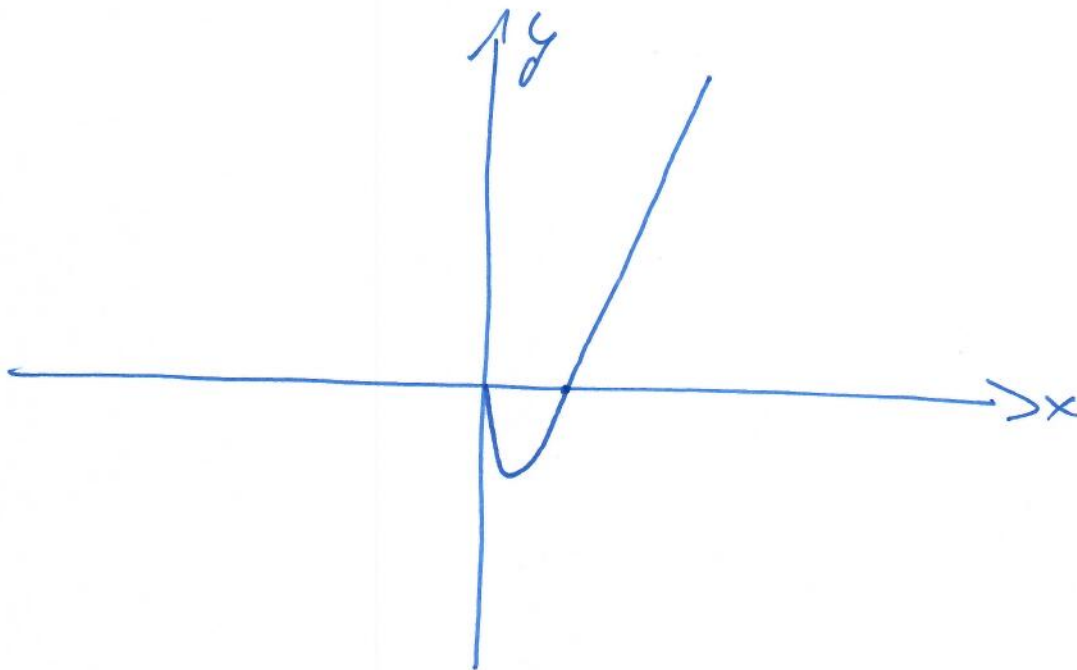
$$\min \left(\frac{1}{3e}, -\frac{1}{e} \right)$$

$$f'(x) = 3(\ln(3x) + 1)$$

X	y
0.1	-0.36
0.01	-0.105
0.001	-0.017

(0,0) - 2 נרד וי

⑥



$$g'(x) = -f(x)$$

$$x = \frac{1}{3} \rightarrow \text{max} \quad || \text{צ' } 0, 1 > 0$$

. max clod