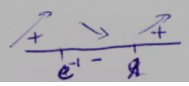
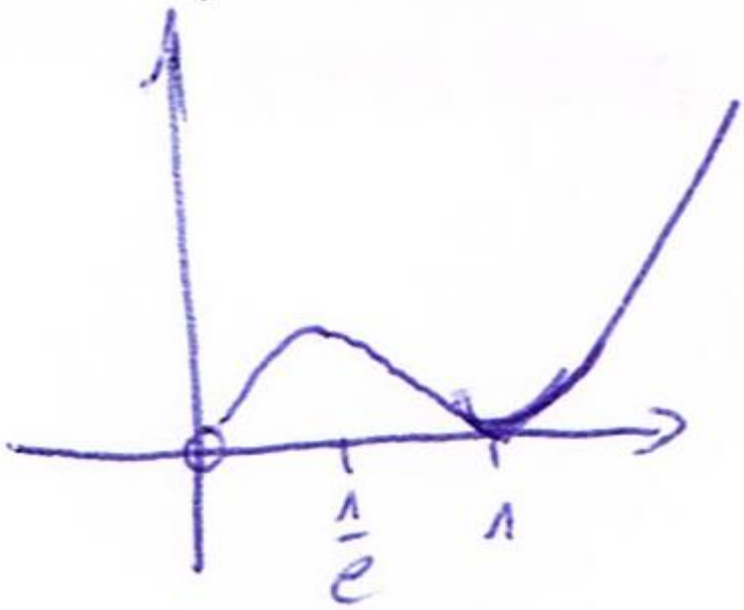
4.2
ס

$y = x^2 \ln^2 x \qquad 0 < x$

$y' = 2x\ln^2 x + \frac{x^2 \cdot 2\ln x}{x} = 2x\ln x(\ln x + 1) \overset{\text{הצבה}}{=} 0$

$x = 0 \quad x = 1 \quad x = \frac{1}{e}$

$(1,0)$ נקודת חיתוך עם ציר ה-x



$\max(1,0) \quad \max\left(\frac{1}{e}, \frac{1}{e^2}\right)$ $\qquad e^{-1} < x < 1$:ירידה $\qquad 0 < x < e^{-1}$ $\qquad x > 1$:עלייה