

Vázaný extrém

$$f(x, y) = 2x - 3e^y + 3$$

$$\text{D(f)}: x > 0$$

$$M: 3y - 2\ln x + 5 = 0$$

$$y = \frac{2\ln x - 3}{3}$$

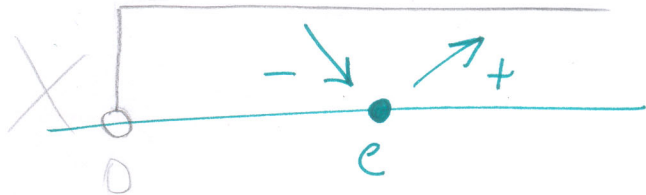
$$I) h(x) = 2x - 3e^{\left(\frac{2\ln x - 3}{3}\right)} + 3 = 2x - 2e\ln x + 3e + 3$$

konstanta

$$II) h'(x) = 2 - 2e\frac{1}{x} = 2\left(1 - e\frac{1}{x}\right)$$

III) Nulový bod $1 = \frac{e}{x} \quad | \cdot x$

$$\underline{x = e}$$



V bodi $\left[e, -\frac{1}{3}, 3e+3\right]$ je ostře lokální vázaný minimum.