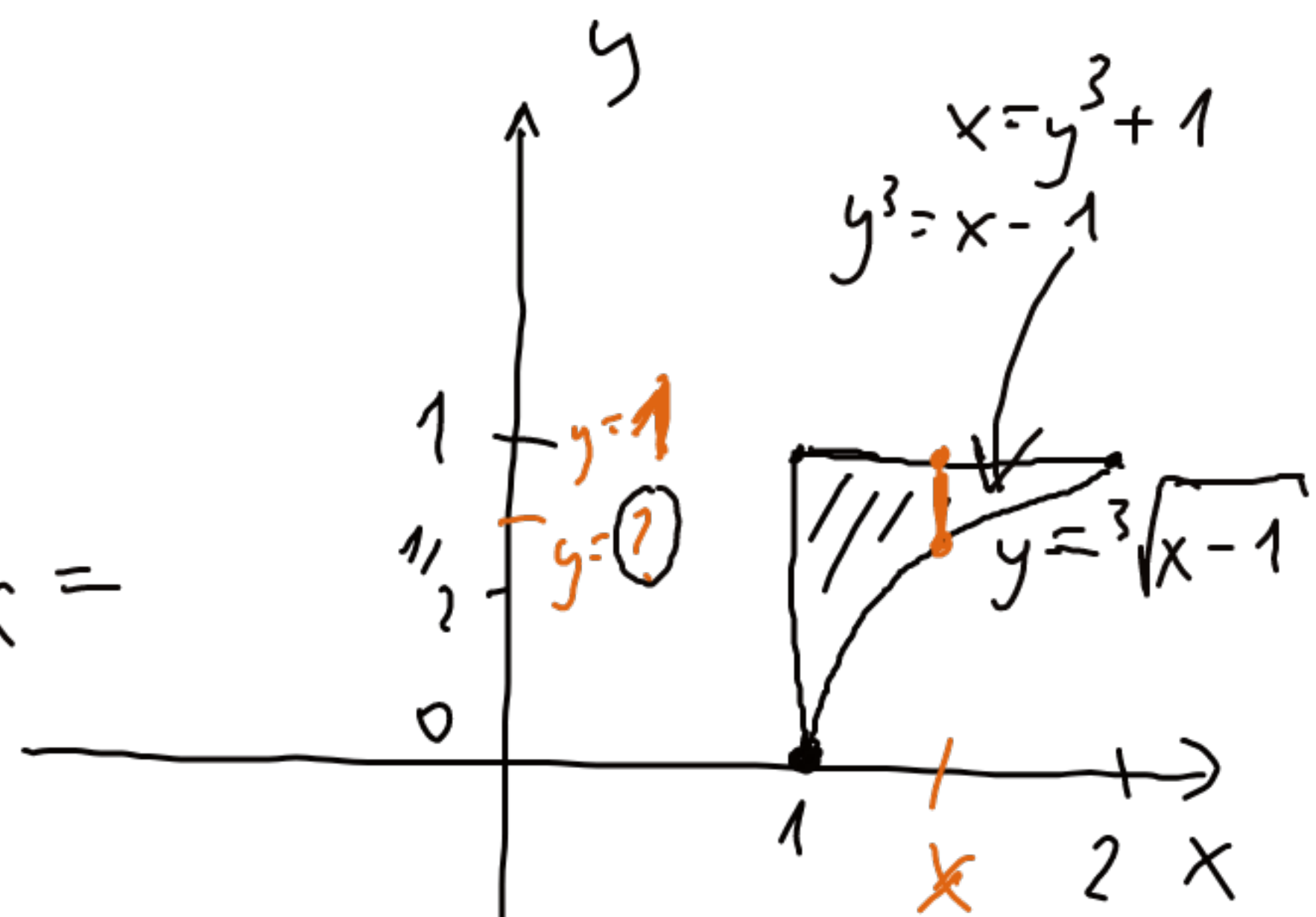


$$\int_0^1 dy \int_1^{y^3+1} \frac{3y^2 e^x}{2-x} dx =$$

$$= \int_1^2 dx \int_{\sqrt[3]{x-1}}^1 \frac{3y^2 e^x}{2-x} dy = \int_1^2 \frac{3e^x}{2-x} \left( \int_{\sqrt[3]{x-1}}^1 y^2 dy \right) dx =$$

$$= \int_1^2 \frac{3e^x}{2-x} \left( \frac{y^3}{3} \right) \Big|_{y=\sqrt[3]{x-1}}^{y=1} dx = \int_1^2 \frac{3e^x}{2-x} \left( \frac{1}{3} - \frac{x-1}{3} \right) dx =$$

$$= \int_1^2 \frac{3e^x}{2-x} \cdot \frac{2-x}{3} dx = \int_1^2 e^x dx = e^x \Big|_1^2 = e^2 - e$$



$$x = y^3 + 1$$

$$y = 0 \rightarrow x = 1$$

$$y = 1 \rightarrow x = 2$$

$$y = \frac{1}{2} \rightarrow x = \frac{9}{8}$$