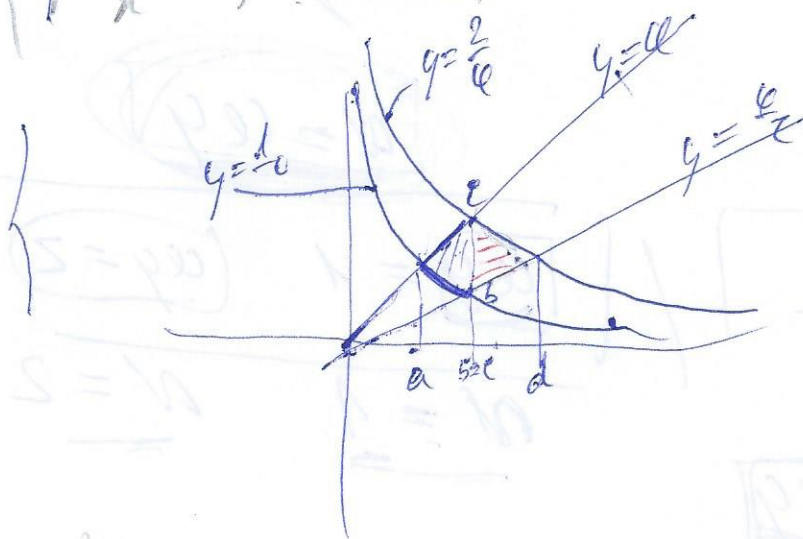


Ex. 4 a)

$$a = \begin{cases} y = ce \\ y = \frac{1}{c} \end{cases} \Leftrightarrow \begin{cases} y = n \\ c = \frac{1}{n} \end{cases} \Leftrightarrow c^2 = 1 \Leftrightarrow c = \pm 1 \text{ or } c = -1$$

$$b = \begin{cases} y = \frac{x}{2} \\ y = \frac{2}{x} \end{cases} \Leftrightarrow \frac{x}{2} = \frac{1}{x} \Leftrightarrow \frac{x^2}{2} = 1 \Leftrightarrow x^2 = 2 \Leftrightarrow x = \pm\sqrt{2} \text{ or } x = \sqrt{2}$$

$$c = \begin{cases} y = x \\ y = \frac{2}{x} \end{cases} \Leftrightarrow x = \frac{2}{x} \Leftrightarrow x^2 = 2 \Leftrightarrow x = \sqrt{2} \text{ or } x = -\sqrt{2}$$



$$d = \begin{cases} y = \frac{x}{2} \\ y = \frac{2}{x} \end{cases} \Leftrightarrow \frac{x}{2} = \frac{2}{x} \Leftrightarrow x^2 = 4 \Leftrightarrow x = \pm 2 \text{ or } x = 2$$

$$\int_1^{\sqrt{2}} dx \int_{\frac{1}{x}}^x e^{xy} dy + \int_{\sqrt{2}}^2 dx \int_{\frac{2}{x}}^{\frac{x}{2}} e^{xy} dy$$