III harjutustund

1. Lahendage

$$y' - (\cot x) \cdot y = 2x \sin x$$

2. Lahendage

$$x\,dy + y\,dx = 3x^2 dx$$

3. Lahendage

$$y = x(y' - x \cos x)$$

4. Lahendage

$$\begin{cases} (x \ln x)y' + y = 2\ln x \\ y(e) = 0 \end{cases}$$

5. Lahendage

$$(x \ln x)y' - (\ln x)y = x$$

6. Lahendage

$$\begin{cases} y' + (\cos x)y = \cos x \\ y(0) = 1 \end{cases}$$