Worksheet
10/4/2019

1. Let W be the set of all differentiable functions y from $(0, 1)$ to $\mathbb{R}$ such that $y' + y = x$ for all $x \in (0, 1)$. Is W a vector space over $\mathbb{R}$?

2. Functions $y_1 = e^x$ and $y_2 = e^{2x}$ are vectors in the vector space $\mathbb{R}^{\mathbb{R}}$. Are they linearly independent?