



Why

If we scale an integrable function is the resulting function integrable? If so, what is its integral?

Result

Proposition 1. *Suppose $f : \mathbf{R} \rightarrow \mathbf{R}$ is integrable. Then for any $\lambda \in \mathbf{R}$, the function λf is integrable and*

$$\int \lambda f = \lambda \int f$$

