



Integrable Function Spaces

1 Why

We have seen that the integrable functions form a vector space. How about the square integrable functions? TODO: perhaps do L^2 first then generalize.

2 Definition

The **integrable function spaces** are a collection of function spaces, one for each real number $p \geq 1$, for which the p th power of the absolute value of the function is integrable.

TODO: case ∞

2.1 Notation

TODO