

Some Notes on Function Spaces

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1 Preliminaries

2 Lebesgue Spaces

3 Distributions

4 Sobolev Spaces

Theorem 4.1. *Here, we use the following notation: $(M^\alpha f)(x) = x^\alpha f(x)$.
If $T \in S'$ and $f \in S$, then $T * f$ is smooth and polynomially bounded.*