Boolean Functions

1 Summary
   - $(2, q)$, $(q, 2)$: hypercontractivity

2 Definition

3 Problems

Ex. when $m = 1, 13$

Problem 1 - part a → uses part from section 9.5

Problem 2 - $(a, a, \beta)$: hypercontractivity

Problem 3 - $(p, q)$: hypercontractivity

Problem 4 - part b → uses dual norm tracks

\[ \| T^\alpha \phi \|_p \leq \| \phi \|_p \leq \| \phi \|_q \]

Then $\| T^\alpha \phi \|_p \leq \| \phi \|_q$ for all $q \geq 2$.

Proposes to $f: (1, 13) \to \mathbb{R}$ by induction.