

Quiz 6

MATH 140B

MSTB 124

NAME (2 POINTS):

Problem 1. (4 points) Let $f(x) = 0$ if $x \neq 1/2$, and $f(x) = 1$ if $x = 1/2$. Calculate from definition $L(f)$ and $U(f)$ on the interval $[0, 1]$; conclude that f is integrable on $[0, 1]$ and say what its value is.

Problem 2. (4 points) Consider the function $f(x) = x$ if x is rational and $f(x) = 0$ if x is irrational. Show that f is not integrable on $[0, 1]$ from definitions.