

Quiz 5

MATH 140B

MSTB 124

NAME (2 POINTS):

Problem 1. (4 points) Calculate $\lim_{x \rightarrow 0} x^{-3} e^{-\frac{1}{x}}$ (hint: try the transformation $y = 1/x$).

Problem 2. (4 points) Suppose f is differentiable on \mathbb{R} and that $f' \geq 1$. Show that f is not bounded on $[0, \infty)$ (hint: consider $f(x) - x$).