

# Take-Home Quiz 5

Due Wednesday, November 20, 2019

1. Given that  $|f'(x)| \leq 1$  for all real numbers  $x$ , show that

$$|f(x_1) - f(x_2)| \leq |x_1 - x_2|$$

for all real numbers  $x_1$  and  $x_2$ .