

Quiz 6

Math 1220-7

October 26, 2012

Name: _____

Directions: Show all work for full credit. Clearly indicate all answers. Simplify all mathematical expressions completely. No calculators are allowed on this quiz. Each part of each question is worth 15 points.

1. Find each limit:

$$(a) \lim_{x \rightarrow \pi/2} \frac{3 \sec x + 5}{\tan x}$$

$$(b) \lim_{x \rightarrow \infty} x^{1/x}$$

2. Evaluate each improper integral or show that it diverges:

(a) $\int_{-\infty}^1 \frac{dx}{(2x-3)^3}$

(b) $\int_0^4 \frac{dx}{(2-3x)^{1/3}}$