

**Quiz 5**

Math 1220-7

October 19, 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 20 points.

1. Use the method of partial fraction decomposition to calculate:

$$\int \frac{x + 8}{(x - 1)(x + 2)} dx$$

2. Find each indicated limit:

(a)  $\lim_{x \rightarrow 0} \frac{x - \sin 2x}{\tan x}$

(b)  $\lim_{x \rightarrow 0} \frac{\tan x - x}{\sin 2x - 2x}$