Math 221 - Quiz #2 Name _____

You must show all relevant work to receive full credit. The point value of each problem is shown in the left hand margin.

(5) 1. Find the antiderivatives:

(a) $\displaystyle\int \frac{e^x}{\pi + e^x}\, dx$

(b) $\displaystyle\int \frac{10^{1/x}}{x^2}\, dx$

(2) 2. Differentiate $y = \sin^{-1} x$.

(3) 3. Find the limit:

$$\lim_{x \to 0} \frac{e^x - 1}{\sin 2x}$$