Name: _____

PHYS 505: Classical Mechanics (graduate), Quiz #1

Instruction: use additional sheets if you find it necessary

1. Find the Taylor series expansion of $\sin x$ at point $x = \pi/2$ up to the fourth order.

2. Find the value of the following integral when $a \to 0$:

$$\int_0^a \frac{x^2}{1 - \exp(-\beta x^2)} dx$$