Math 251: Pledged Set 11

Due: December 4, 2009

This is a pledged set. Therefore, no outside help from book, calculator, or other people.

1. Evaluate
$$\int_0^{\pi/2} \cos^5 x \; dx$$

2. Evaluate
$$\int x^3\sqrt{9-x^2}\; dx$$
using $x = 3\ \sin\theta$.

3. Evaluate
$$\int \frac{r^2}{r+4}\; dr$$
using partial fractions.

4. Find
$$\int \frac{dx}{x^2-4}$$

5. Evaluate
$$\int \frac{2x^2-x+4}{x^3+4x} dx.$$