Math 4450: Homework 12

Due December 11, 2009

Written problems

1. 6.3: 14

2. For $n \in \mathbb{Z}_{\geq 1}$, integrate

$$\int_0^{2\pi} \cos^n(t)\,dt$$

   using complex analysis. (Hint: Remember the binomial theorem?)

Problems

1. 6.1: 2, 4, 7

2. 6.2: 4, 8

3. 6.3: 4, 7, 15(b)

4. 6.5: 2, 11

5. 6.6: 4, 13