

MATH 502 - SPRING 2009

HOMEWORK # 7 - Due FRIDAY MARCH 6, 2009

Work out all the following problems from Stein-Shakarchi's book. Every problem is worth **5 points**.

- **Chapter 3:** (pages 106-107) 19.
- **Additional Problems:** Compute the following integrals using residues:

(a) $\int_0^{\infty} \frac{x^{a-1}}{1+x} dx, \quad 0 < a < 1;$

(b) $\int_0^{\infty} \frac{\log x}{1+x^4} dx.$