Homework 1

Name: Date: July 7, 2015

P 1. Find

$$\int (t^2 + t - 1)\sqrt{3t + 4}\, dt$$

P 2. Find

$$\int 9^{2x+5} + 3x \sec(4x^2 + 2) - 5 \cot\left(\frac{x}{11}\right)\ dx$$

P 3. Use the Trapezoidal Rule to approximate

$$\int_0^3 \frac{1}{60}\left(\frac{x^6}{2} - 4x^5 + \frac{15x^4}{2}\right)\, dx,$$

with 5 trapezoids.

(a) What is a bound on the error in using this approximation?

(b) What is the exact value?

(c) What is the exact error?