

Name: \_\_\_\_\_

1. Class notes for this week: This week we have covered Sections 5.5 and 4.5. Next week we will cover Section 5.1 and have two review periods.

2. Compute the integrals.

(a) (2 points)

$$\int \frac{\sec(12x) \tan(12x)}{\sqrt{\sec(12x)}} dx$$

(b) (1 point)

$$\int_{-5\pi}^{5\pi} \frac{\tan x}{x^4 + 2} dx$$

3. (a) (2 points) What is the average value of the function  $f(x) = x^2 + \sin(\frac{\pi}{4}x)$  over the interval  $[0, 2]$ ?