

# Calc II Problem sheet

Monday, June 21

1. Compute

$$\int_1^{\infty} \frac{1}{x^3} dx.$$

2. (a) Write a complete sentence explaining why

$$\int_1^{\infty} \frac{\sin^2(x)}{x^3 + 1} dx$$

converges.

- (b) Does

$$\int_0^{\infty} \frac{\sin^2(x)}{x^3 + 1} dx$$

converge? Why or why not?