

College of the Holy Cross, Spring Semester, 2019
Math 134 Worksheet 11
Due Thursday, March 21

1. Evaluate each of the following improper integrals.

(a) $\int_1^{\infty} \frac{4}{x^3} dx$

(b) $\int_1^{\infty} \frac{4}{\sqrt{x}} dx$

(c) $\int_1^{\infty} 2 dx$

(d) $\int_0^{\infty} \frac{24x}{(x^2 + 4)^2} dx$

(e) $\int_0^{\infty} 300xe^{-5x} dx$

2. Find the present value of an investment that generates income at a rate of $\$1000e^{0.01t}$ per year, assuming an interest rate of 6%.