

MATH 20C: FUNDAMENTALS OF CALCULUS II
WORKSHEET, DAY #19

Problem 1. Decide if the integral converges, and if so compute its value.

(a) $\int_0^{\infty} \frac{2x}{x^2 + 1} dx.$

(b) $\int_{-\infty}^{-1} \frac{1}{x^{4/3}} dx.$

(c) $\int_0^2 \frac{1}{x^2} dx.$

Problem 2. Sales of the text *Calculus and You* have been declining continuously at a rate of 5% per year. Assuming that *Calculus and You* currently sells 5000 copies per year and that sales will continue this pattern of decline, calculate the total future sales of the text.