

Math. 126 Quiz #7

March 16, 1999

1. Which of these integrals is *improper*? No reasons need be given - just a list of the letters (a-d) for the improper ones.

a. $\int_0^{\infty} e^{-x} dx$

b. $\int_{-1}^1 \frac{dx}{x}$

c. $\int_{-1}^1 \sqrt{1-x^2} dx$

d. $\int_{-1}^1 \frac{dx}{\sqrt{1-x^2}}$

2. For which values of r does $\int_0^3 x^r dx$ converge? Be sure to consider both positive and negative values. For this problem, some reasoning should be given for your conclusions.