

Worksheet 7.8

Full Name: \_\_\_\_\_ Score: \_\_\_\_\_

1. Determine whether each of the following improper integrals converges or diverges. Find the exact values of those that converge.

(a)  $\int_2^{\infty} \frac{8}{x^5} dx$

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

(c)  $\int_3^{\infty} \frac{1}{(4x-3)^{\frac{3}{2}}} dx$

(d)  $\int_0^4 \frac{2}{\sqrt{x}} dx$

(e)  $\int_0^2 \frac{2}{(x-2)^2} dx$

$$(f) \int_1^3 \frac{1}{x-2} dx$$