

(11.3) Integral Test

Full Name: _____

1.

(a) Converges ($p = 3$ and $3 > 1$)

(b) Diverges ($p = 3/5$ and $3/5 \leq 1$)

(c) Converges ($p = 2$ and $2 > 1$)

(d) Diverges ($p = 1/2$ and $1/2 \leq 1$)

2.

(a) Diverges $\left(\int_1^{\infty} \frac{x}{x^2 + 4} dx \text{ diverges} \right)$

(b) Diverges $\left(\int_1^{\infty} \frac{\ln(x)}{x} dx \text{ diverges} \right)$

(c) Diverges $\left(\int_2^{\infty} \frac{1}{x \ln(x)} dx \text{ diverges} \right)$

(d) Converges $\left(\int_1^{\infty} \frac{x^2}{e^{x^3}} dx \text{ converges} \right)$