

4.

$$\text{a. } \int_1^{\infty} \frac{1}{i^{1.1}} di \rightarrow -10(1/i^{.1}) \rightarrow -10(1/\infty^{.1}) - (-10(1/1^{.1})) = 0 - (-10) = 10$$

Because the integral converges, we can also say that the series **converges**.

$$\text{b. } \int_2^{\infty} \frac{1}{i \ln(i)} di \rightarrow \ln|\ln(i)| \rightarrow \ln|\ln(\infty)| - \ln|\ln(2)| \rightarrow \infty - .3665 = \text{Divergent.}$$

Because the integral diverges, we can also say that the series **diverges**.