

Determine if each of the following improper integrals converges or diverges.

1. $\int_2^{\infty} \frac{1}{x^3 + 2} dx$

2. $\int_5^{\infty} \frac{1}{\sqrt{x} - 2} dx$

3. $\int_2^{\infty} \frac{2}{\sqrt{x} + x^2} dx$

Recap for Today

- The Comparison Theorem gives us a tool for determining whether an improper integral converges or diverges, even if we cannot find an antiderivative.
- Even if we cannot find the antiderivative for a convergent improper integral, we can still find a numeric approximation for the improper integral.