

MATH 1336: Calculus III

Section 5.4, Part 2: Series Tests Practice

Problems for Group Work:

Be sure to fully justify your reasoning as a part of your solutions.

The answers are upside-down on the bottom of this page.

For Problems 1-5, determine whether the series is convergent, divergent, or if we cannot determine the convergence behavior using the tests we know at this point.

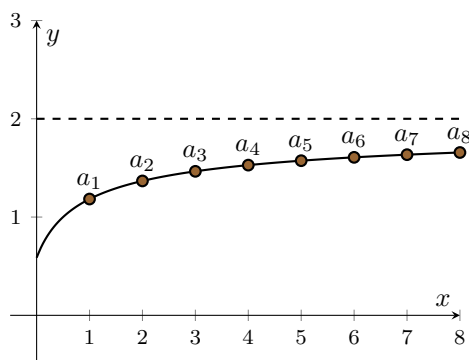
1. $\sum_{n=1}^{\infty} \frac{1}{n^2 + 1}$

2. $\sum_{n=1}^{\infty} \frac{n}{n^2 + 1}$

3. $\sum_{n=1}^{\infty} \frac{\cos(n)\sqrt{n}}{3n + 4}$

4. $\sum_{n=1}^{\infty} \int_n^{n+1} \frac{dx}{x^{2/3}}$

5. $\sum_{n=1}^{\infty} 2^{-n} a_n$, where $a_n = f(n)$ as shown below:



Answers: Problem 1: Converge, Problem 2: Diverge, Problem 3: Cannot Determine, Problem 4: Diverge, Problem 5: Converge,