Taylor Series!

Chase Mathison[1]

Shenandoah University

29 April 2024

[1]cmathiso@su.edu

1. Exam Wednesday.

2. No class Thursday.

3. Office hours 10am - 11am.

Taylor Series

So we know how to find a power series for a function that's related to $\frac{a}{1-r}$, but how would we find a power series for the function $f(x) = \sin(x)$ centered at 0?

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Given a function $f(x)$ with as many derivatives as we want at $x = a$, the _____ for f centered at a is defined to be the following series:

If $a = 0$, we call this series the _____ for f instead.

Example

Use the Maclaurin series of $\sin(x)$ that we just found to find the Maclaurin series for $\cos(x)$.