

Introduction to Differentiation

Working toward our goal of “differentiating everything”, this lecture introduces some useful new formulas.

There are two basic types of derivative formulas:

1. Specific Examples: power rule
2. General Examples: $(u + v)' = u' + v'$ and $(cu)' = cu'$ (where c is a constant)

We need both kinds of formulas to take derivatives of polynomials, for example.

This lecture focuses on the basic trig functions, finding specific formulas for the derivative of the sine function and the cosine function.