

Rules of differentiation

After completing this section, students should be able to do the following.

- Use the definition of the derivative to develop shortcut rules to find the derivatives of constants and constant multiples.
- Use the definition of the derivative to develop shortcut rules to find the derivatives of powers of x .
- Use the definition of the derivative to develop shortcut rules to find the derivatives of sums and differences of functions.
- Compute the derivative of polynomials.
- Recognize different notation for the derivative.
- State the derivative of the natural exponential function.
- State the derivative of the sine function.