

# Logarithmic Functions

*This section is an exploration of logarithmic functions, their uses and their mechanics.*

By the end of this section students should be able to:

- Identify the relationship between logarithmic functions and exponential functions.
- Utilize logarithms to solve for variables in exponential functions and equalities.
- Utilize properties of logarithmic functions to expand or condense logs.
- Utilize the change of base formula to deal with logs of different bases.

In this section we aim to answer the following questions

- What role do logarithms play mechanically?
- Where do logs come from?
- Where do we see logs come up “naturally”?
- What are the properties of logs and why do we care?