Exponential Functions: Goals

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

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

- Know what it means to 'grow exponentially' and identify when things grow exponentially or not.
- Calculate the 'growth multiplier' and use it to create a correct exponential growth formula.
- Utilize an exponential growth formula to determine the result of exponential growth or decay after a given time period.
- Understand the differences (and similarities) of exponential growth and decay; specifically to be able to explain the mathematical difference as well as the conceptual difference.
- Solve for unknowns in exponents in an equality.
- Know and utilize the properties of exponents to simplify or expand exponentials as necessary.

- What *are* exponents?
- How do we interpret negative exponents?
- How do we interpret fractional exponents?
- What kind of models use exponents?

Learning outcomes: