

## Goals of this Section

*This section is on learning to use mathematics to model real-life situations.*

The following video outlines the general structure and intent of the course up until we cover section 8 (polynomials).

YouTube link: <https://www.youtube.com/watch?v=zt9ZJPXPZ0Q>

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

- Have an understanding of what a mathematical model is.
- Know the benefits (and weaknesses) of mathematical models.
- Be familiar with a basic approach to building a generalized mathematical model.
- Know (and understand) the types and roles of variables in mathematics.
- Produce a generalized model given minimal initial information.

Questions we aim to answer...

- What is Mathematical Reasoning?
- How do you tell what is important and what is extraneous information?
- Why are Models useful?
- How does this apply outside of a classroom?
- When should you extend to a model, and when should you not?
- What is the virtue of generalizing?
- Can you generalize a generalization?