

MA103: Mathematical Modeling & Intro to Calculus

What is Modeling? 1

Lesson Objectives: Cadets will

1. learn how to contribute positively to our classroom culture.
 2. be familiar with course documents and know the course expectations, including how the Honor Code applies to this course.
 3. describe the modeling triangle.
 4. describe the modeling process.
 5. be able to identify and explain what modeling decision and assumptions are.
 6. be able to justify a modeling assumption as *reasonable* and *necessary*.
 7. define the MA103 ethics framework.
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1 Admin Check List

- Canvas
- Connect
- Homework: Scavenger Hunt Exercise - due 26 Aug
- Instructor Website
- Bonus points for lesson reviews
- Schedule Meeting with Me and AI

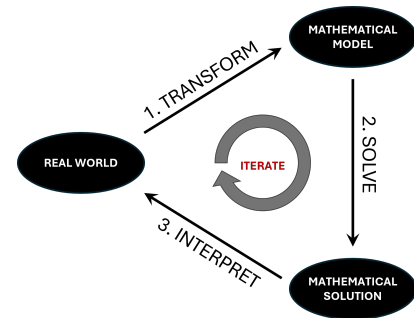
2 Problem

How many jars of peanut butter does the Corps of Cadets eat?

Modeling Steps:

1. Transform

- Given:
- Find:
- Explore:
 - Define variables:
 - Make assumptions: are your assumptions *reasonable* and *necessary*?
 - Model type:
- Final Model:



2. Solve

3. Interpret

Why Math Modeling? This course is not a traditional math course. Why do you think it is important to you? Why do you think USMA requires all cadets to take a math modeling course?