

Introduction

Syllabus

Highlights

- Professor: Max Lieblich, lieblich@uw.edu
- Course website: [enjoy](#). (Just search for "Max Lieblich math 126" on the internet to find it.)
- Homework: [webassign](#), due every Tuesday and Thursday
- Midterms: two.
- Final: end of quarter, three hours of fun.
- Grading: roughly 25% for homework, each midterm, final. I reserve the right to tweak this at any time.
- What can we expect from one another?

Math Study Center

- Open to anyone, with questions or without, confused or clear, loving math or not.
- Communications B-014
- Hours:
 - M-Th: 9:30AM to 9:30PM
 - Fri: 9:30AM to 1:30PM
 - Sun: 2PM to 6PM
- You will need to make your own private Math Study Center on Saturday.

Questions?

- Am I ready for this course?
- What will the median grade be?
- How will I ever stop loving calculus?

You have seen

- Derivatives...
- Integrals...
- Differential equations...
- In one variable only
- (with a smidgen of parametric motion).

We have really only equipped you to understand life on a string.

That sucks

How can we understand a situation closer to reality?

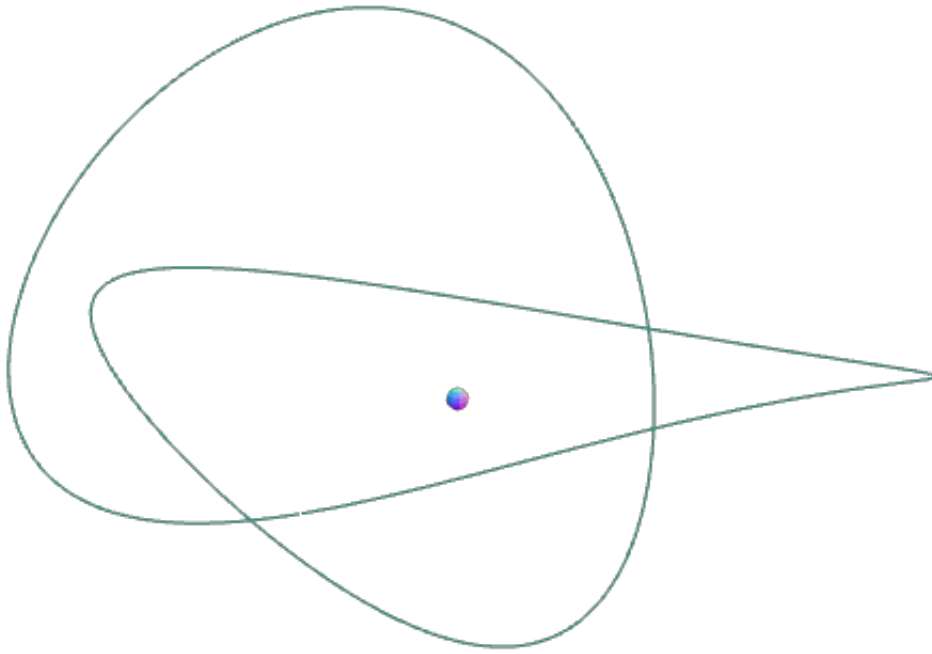
How can we

- model three-dimensional space?
- describe shapes in that space?
- describe physical properties of objects in space (center of mass, density, etc.)?

**Questions we
might ask:**

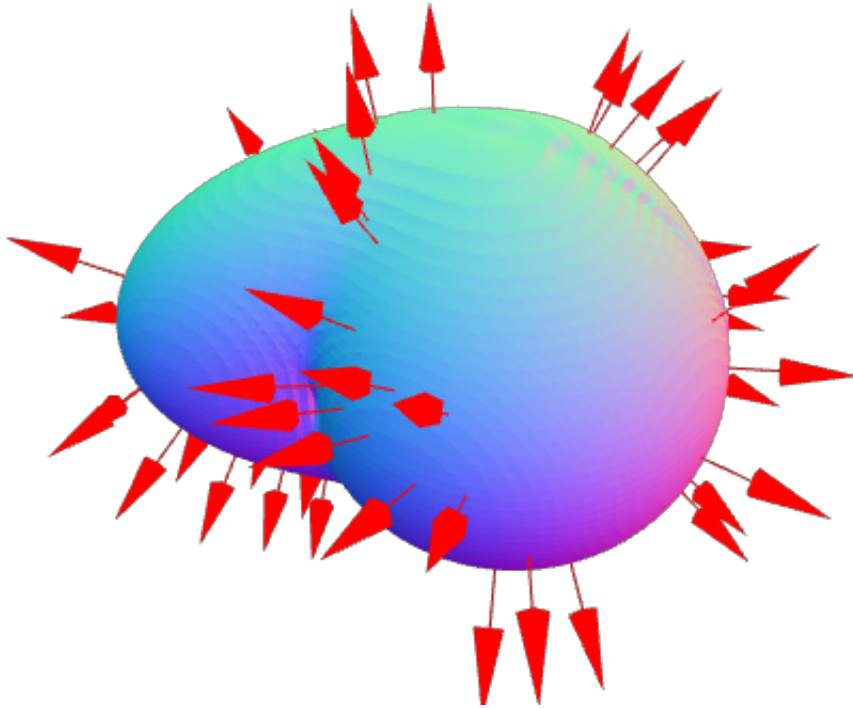
Question

How does it feel to fly along this trefoil path?



Question

How do we find lines perpendicular to a surface (even a weird one)?



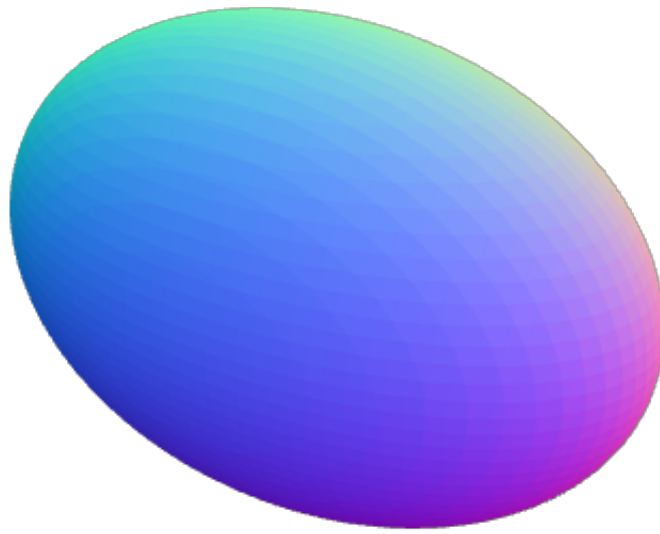
Question

What makes this shape...



Question

...different from this one?



Properties we might examine

We could try to characterize shapes and objects using things like

- Curvature (what is this?)
- Surface area (I think I know what this is)
- Volume (OK, whatever)
- What other mathematical properties might distinguish objects?

