

CSE 167:
Introduction to Computer Graphics
Lecture #11: Curves

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Announcements

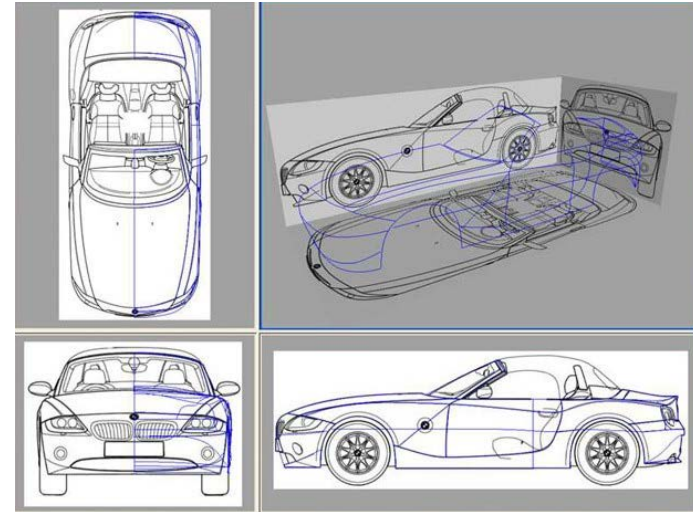
- ▶ **Midterm**
 - ▶ To be returned in class today
- ▶ **Voting for best robot of project 3 open until midnight**
 - ▶ Instructions on Piazza
- ▶ **Discussion tomorrow**
 - ▶ Tips for project 4
- ▶ **Project 4 due next Friday**
 - ▶ Grading in CSE basement labs B260 and B270
 - ▶ Upload code to TritonEd by 2pm
 - ▶ Grading order managed by Autograder

Lecture Overview

- ▶ Polynomial Curves
 - ▶ Introduction
 - ▶ Polynomial functions
- ▶ Bézier Curves
 - ▶ Introduction
 - ▶ Drawing Bézier curves
 - ▶ Piecewise Bézier curves

Modeling

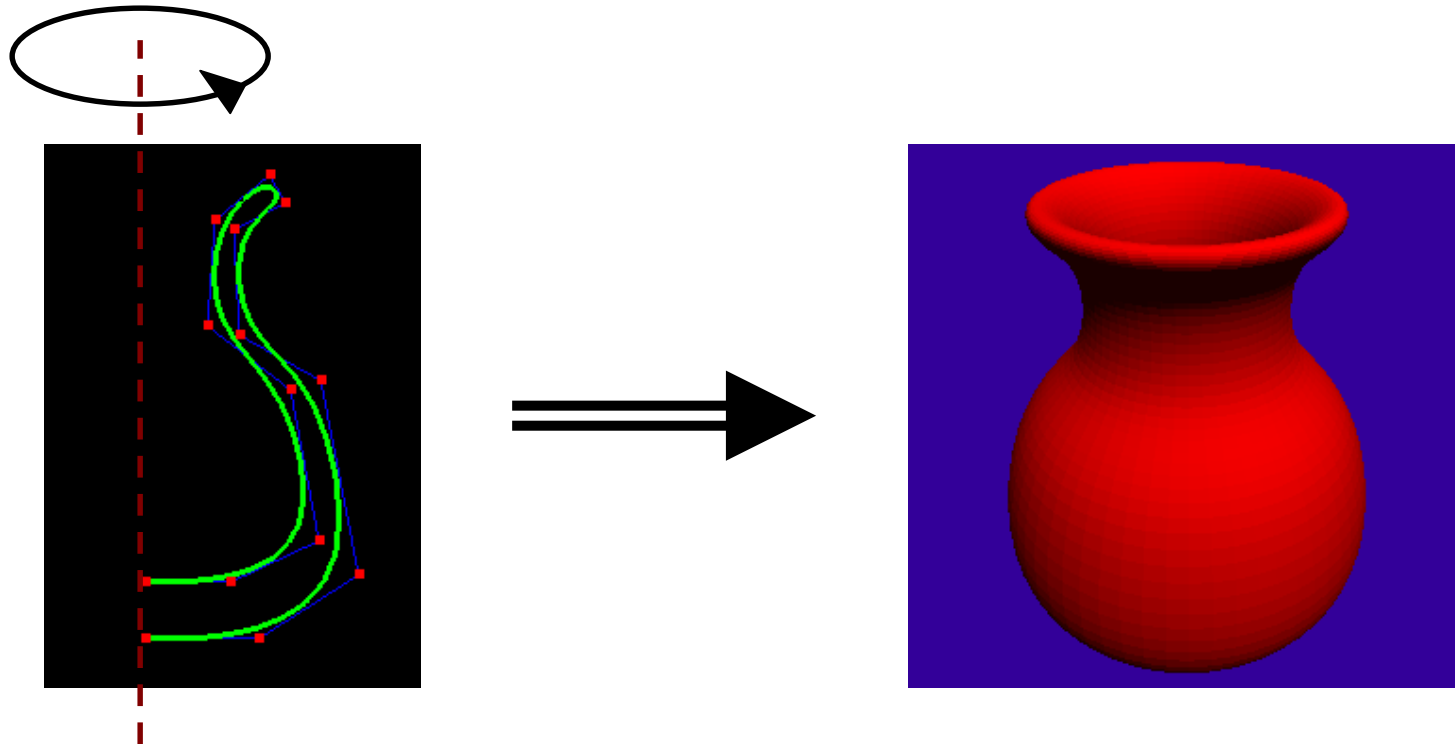
- ▶ Creating 3D objects
- ▶ How to construct complex surfaces?
- ▶ Goal
 - ▶ Specify objects with control points
 - ▶ Objects should be visually pleasing (smooth)
- ▶ Start with curves, then surfaces



What can curves be used for?

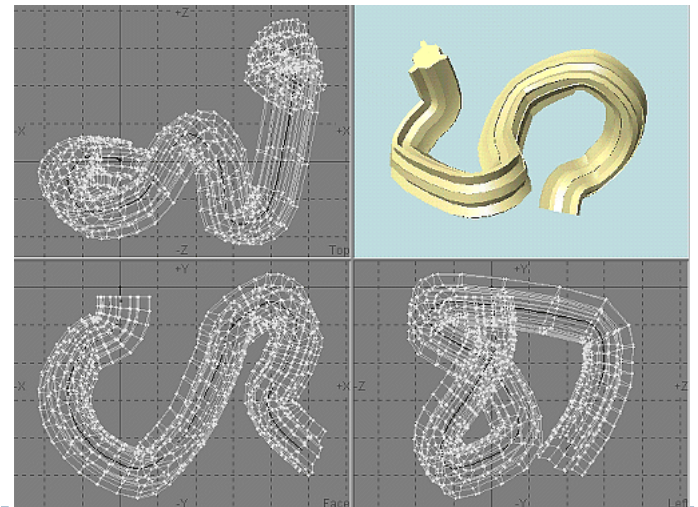
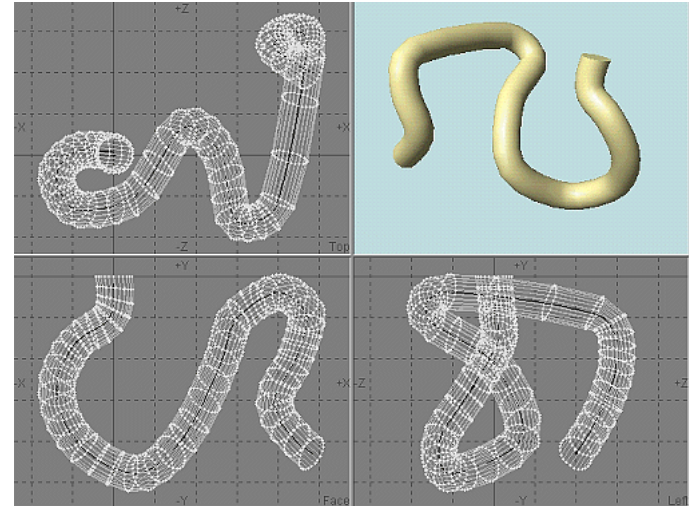
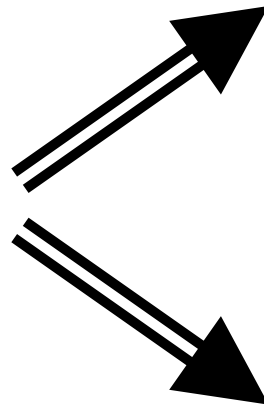
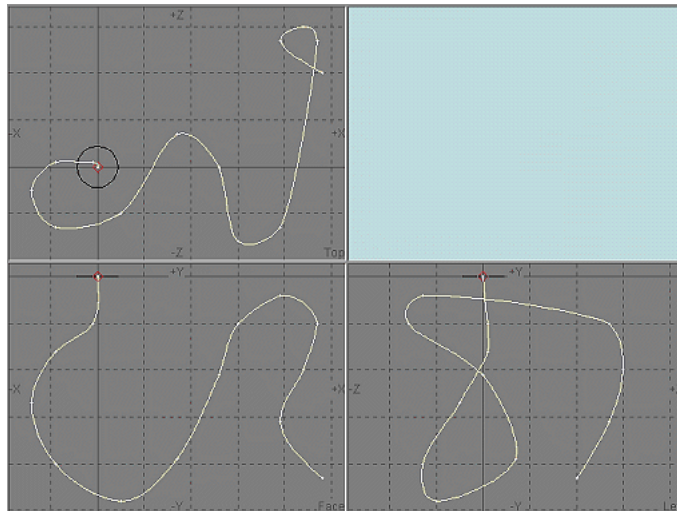
Curves

- ▶ Surface of revolution



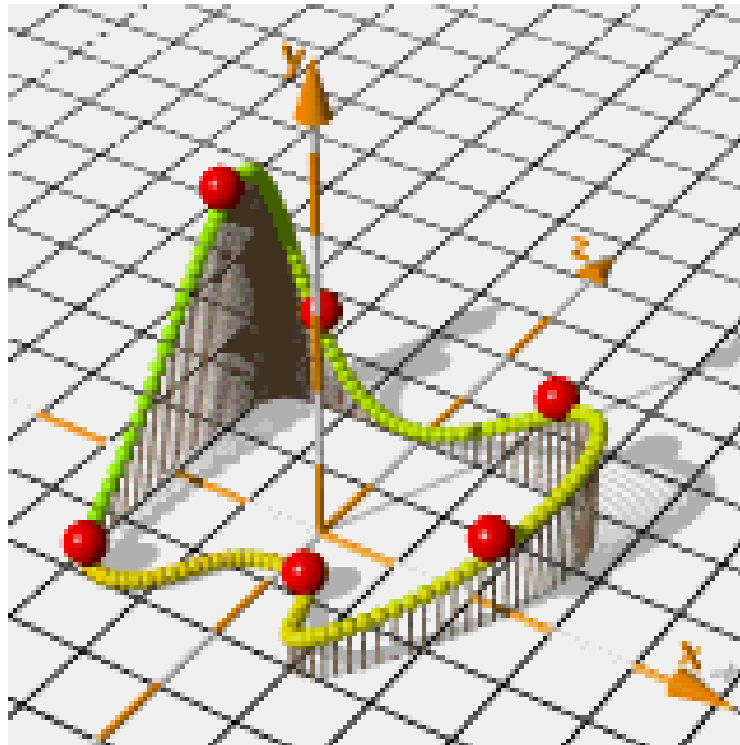
Curves

▶ Extruded/swept surfaces



Curves

- ▶ Animation
 - ▶ Provide a “track” for objects
 - ▶ Use as camera path



Video

- ▶ Bezier Curves

- ▶ <http://www.youtube.com/watch?v=hIDYJNEiYvU>

