• Lecture # 10
  – Section Views
  – Auxiliary Views
Results of Midterm Exam

- Average score: 85
- STD: 11
- High score: 100 (3)

- >90 A
- >80 B
- >70 C
- <60 Please see me
Review of Midterm Scores

• All requests for score review must be done in writing
• 50 words or less, single sheet of paper
• Staple to your exam, and submit to E28 HW collection box in Etcheverry Hall
• Deadline is 3:00 PM next Wednesday
Homework

• HW #5 due Wednesday, 3:00 PM
• To be done in AutoCAD (except for pictorial sketches)
• Must be geometrically accurate
• Add dimensions for those figures with dimensions
Section Views
The Problem with Hidden Lines...
Looking Inside the Object...
Types of Sections

- Full
- Half
- Offset
- Removed
- Revolved
- Broken-out
Types of Sections
Section Views

- Phantom line (or dashed line) across the object represents edge of cutting plane
- Line weight same as for visible edges
- Arrows point in direction of viewing
- Object orientation must follow rules of orthogonal projection
- Cutting-plane line and corresponding section-view labeled with capital letters
- Areas formerly solid are crosshatched
A Full Section
Arrow Direction

SECTION B-B

A → B

SECTION A-A
Multiple Sections
Location and Scale

SECTION B-B
SCALE 2:1

SECTION C-C
SCALE 2:1

SECTION D-D
SCALE 2:1

SECTION A-A
Reduction of Hidden Lines
Crosshatching Technique

- Proper
- Unven spacing or orientation
- Uneven line weights
- Edge limits not observed
- Too dense
- Avoid solid fill
- Not dense enough
- Parallel to major edges
- Parallel to major edges
- Parallel to major edges
Crosshatching Patterns

- General use
- Steel
- Aluminum
- Bronze, brass, copper
- Rubber, plastic
- Lead, zinc, babbitt
- Titanium
- Glass, ceramic, stone
- Concrete
- Sand
- Earth
- Water
An Offset Section
A Half Section
Other Types of Sections

- Removed section
- Revolved section
- Broken-out section
A Removed Section
A Revolved Section
A Broken-out Section
Auxiliary Views

• Drawings show features in true shape, standard view sufficient in most cases
• Auxiliary views used where standard views are insufficient
• First Principle of Orthogonal Projection still used
Auxiliary Views
Auxiliary Views

Parallel to surface
Auxiliary Views

(True shape)
Features at an Angle
End

• Questions?