

DUE DATE _____

NAME _____

ENGR/DRAFT 105 Assignment #1, Freehand Sketching

Instructions:

- 1) Do exercise 3.1
 - For the first part of the exercise, you will practice drawing each of the line types 2 times (the first construction line is drawn as an example). Be sure to use the correct pencil for each line type:
 - 3mm: Light pressure used to draw thin construction lines, guidelines, etc.
 - 5mm: Medium pressure used to draw medium thick hidden, section, center, and dimension lines.
 - 7mm: Medium pressure to draw thick object (visible) lines and lettering.
 - 9mm: Heavy pressure to draw very thick lines, including borders, phantom lines, and cutting plane lines.
 - For the second part of the exercise at the bottom of the page, you only have to draw 10 lines each direction (you may draw more if you wish).
- 2) Do exercise 3.2
 - Be sure to use light construction lines, and thick, sharp visible (object) lines.
- 3) Do exercise 3.3
 - Be sure to use light construction lines, and thick, sharp visible (object) lines.

Note: Be sure to use bond paper (opaque) or velum paper (transparent) underneath your drawings. Smooth paper to remove any bubbles underneath. When using compasses, put several pieces of masking or drafting tape under the point. NEVER use scotch taper on the drafting tables – it is next to impossible to remove, and may damage the table in the process.

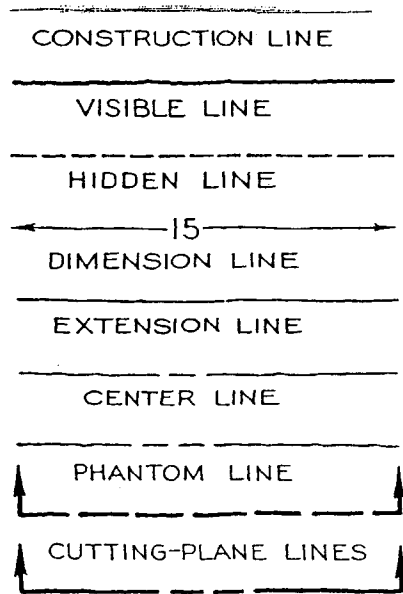
Staple this sheet to the front of your drawings in the correct order. Write your name at the top of the page. Write your name on each drawing.



Worksheet 3.1

Practice sketching freehand lines

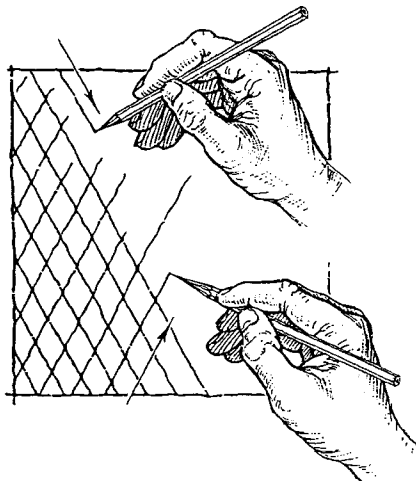
Use the spaces at right to practice sketching freehand lines of each type shown below. The first construction line is done for you.



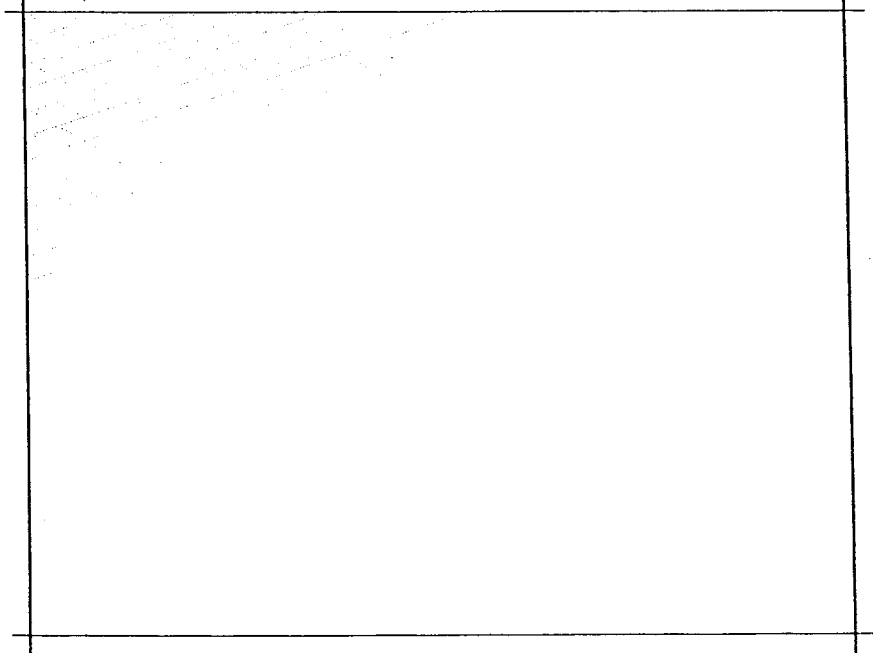
Construction lines	Construction lines
Visible lines	Visible lines
Hidden lines	Hidden lines
Dimension lines	Dimension lines
Extension lines	Extension lines
Center lines	Center lines
Phantom lines	Phantom lines
Cutting plane lines	Cutting plane lines

Sketching inclined lines

For inclined lines, shift position with relation to the paper or turn the paper slightly. Use the same movements as for horizontal or vertical lines.



Complete the series of inclined lines below.



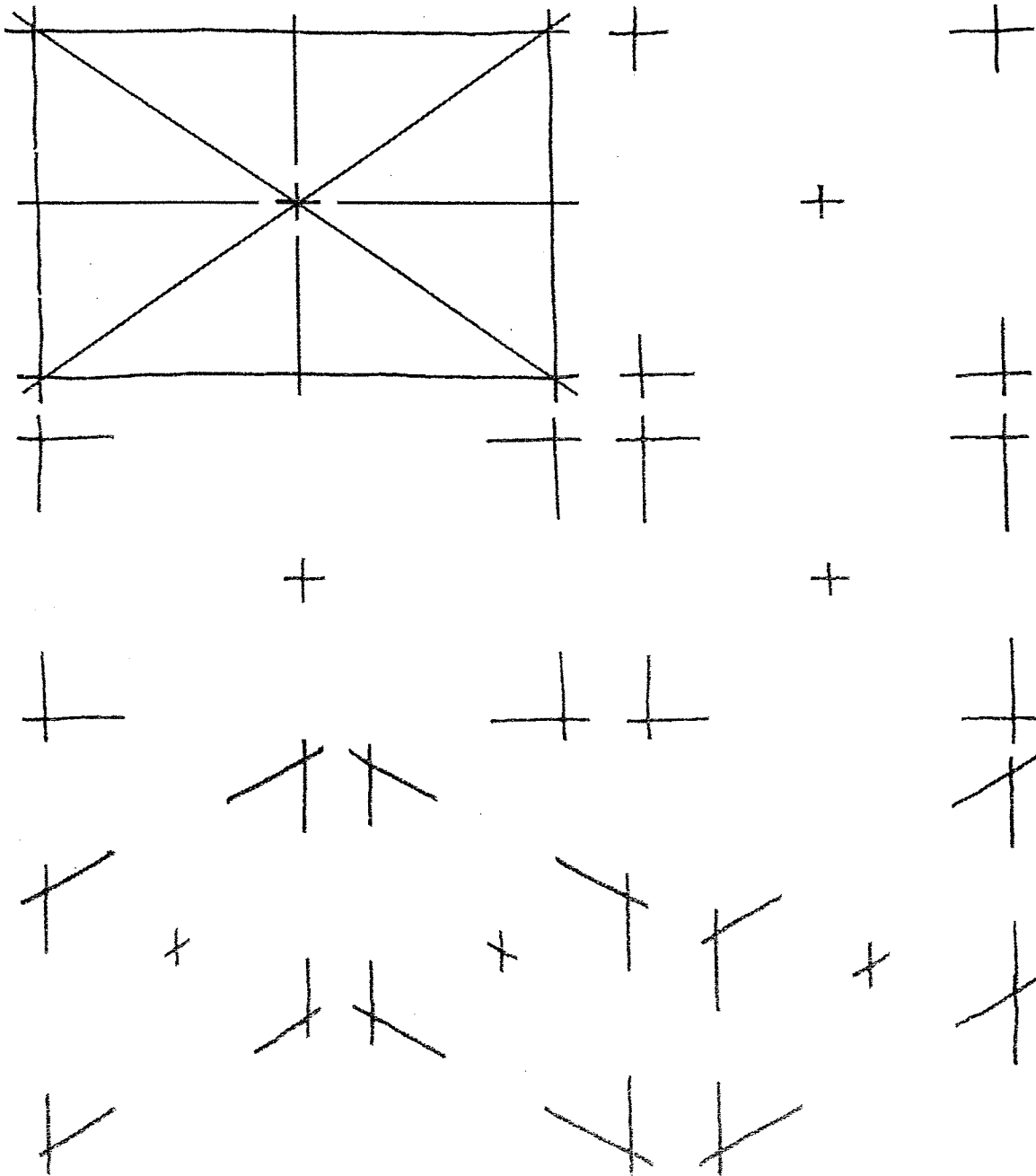
Make copies of these pages to use for additional practice.



Worksheet 3.2

Sketching circles and ellipses

Use the construction lines provided below to begin sketching circles and ellipses. Practice this technique and the others you have learned for creating circles and ellipses on your own unlined paper.



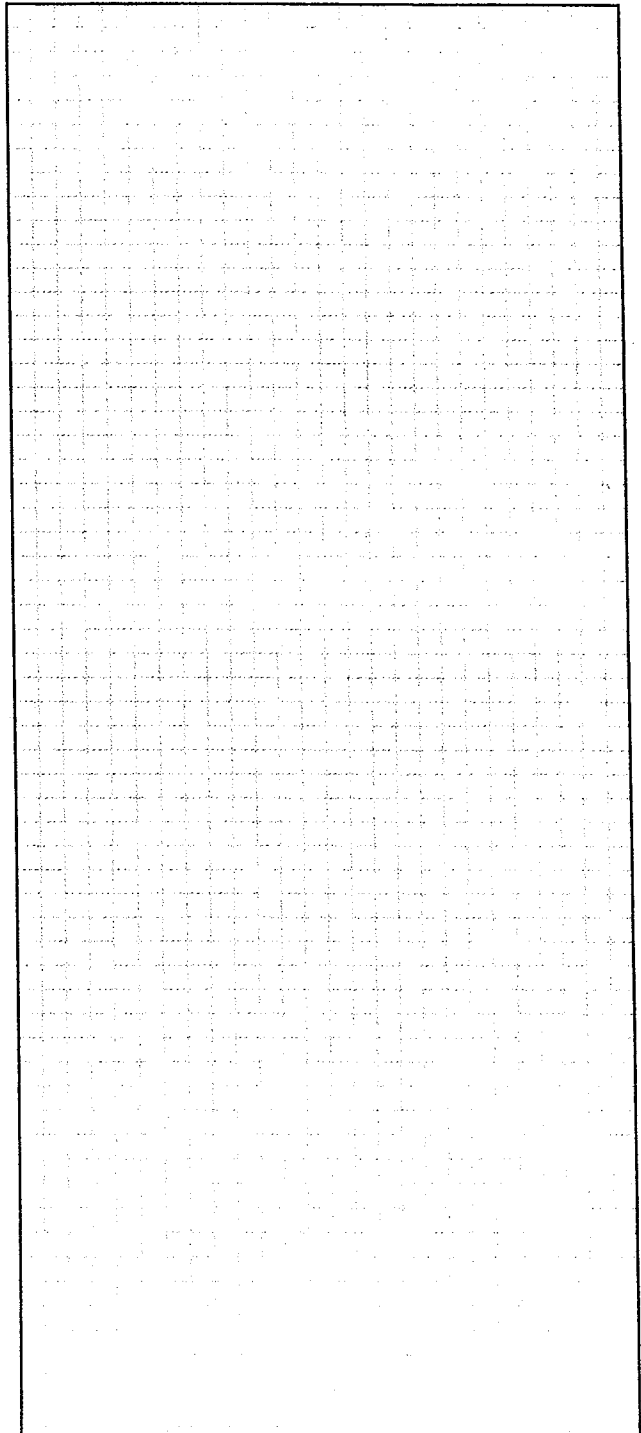
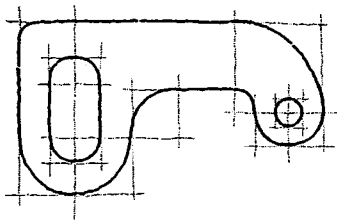
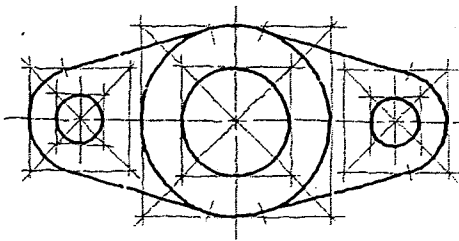
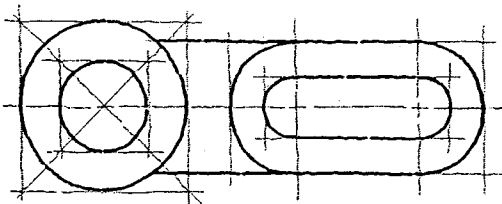
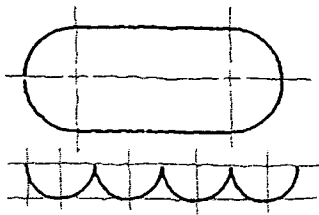
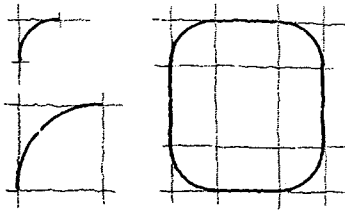
Make copies of these pages to use for additional practice.



Worksheet 3.3

Practice line and curve technique

Sketch the figures below on the grid provided.



Make copies of these pages to use for additional practice.