

BASIC TECHNICAL DRAWINGS

FREEHAND SKETCHING

OVERVIEW

Freehand sketching is a method of making a drawing without the use of drafting tools. It is essential for all drafters and students of drafting to become proficient in sketching. Freehand sketches are executed to convey simple and complex information and details quickly. Many of the rules for formal instrument drawings are not followed on the sketch. However you as the drafter will use sketches to transform them into instrument or CAD drawings. Sketches allow engineers and others to try out their ideas and concepts cheaply, allowing for quick revisions before the formal processes of manufacturing are started.

Sketches will allow:

- A. Transmission of ideas quickly and cheaply.
- B. Preliminary planning.
- C. Thinking through a drawing for view placement.

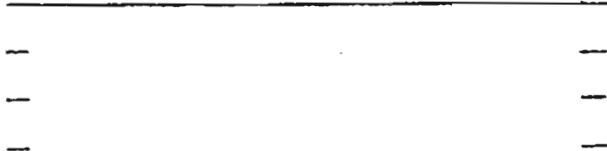
When sketching grip your lead holder firmly, but light enough to draw freely. Too tight of a grip will cause cramping of your hand.

When sketching your eyes should be looking at the termination point of the line. Using a series of light-long strokes at first, then darker-firmer shorter strokes will create fairly straight or round lines as required.

Fairly round arcs and circles can be created by drawing a square first. Your pencil will be used to transmit or transfer distances. Your thumb can act as a measuring scale for a one unit measurement. Using your pencil and some basic geometry you can divide your one unit scale into equal parts for fractions of a unit. Like lettering, sketching takes time and practice to do a good job. It is VERY IMPORTANT to start out with the good habits taught during the demonstrations. These habits will form great technique and satisfying results.

1. Using pencil, draw additional lines that match the density and width of the printed samples.

VISIBLE LINES



HIDDEN LINES



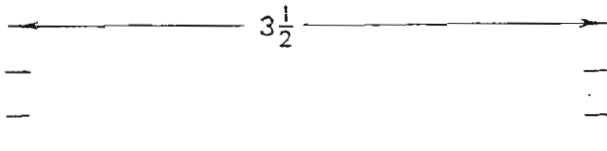
SECTION LINES



CENTER LINES



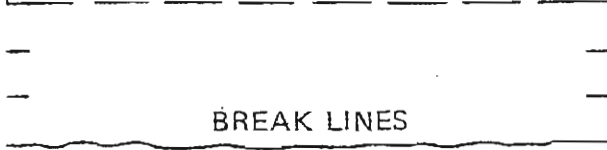
DIMENSION AND EXTENSION LINES



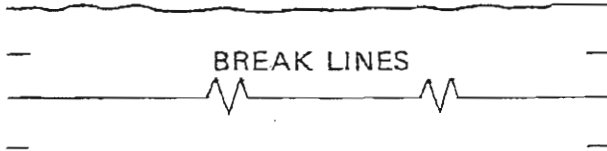
CUTTING-PLANE LINES



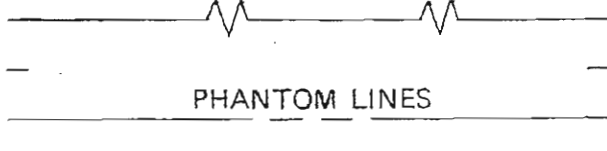
ALTERNATE CUTTING-PLANE LINES



BREAK LINES



BREAK LINES



PHANTOM LINES



2. Sketch the same exercises as in Part 1.

VISIBLE LINES



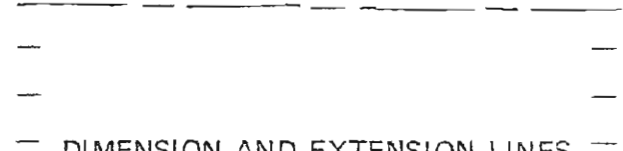
HIDDEN LINES



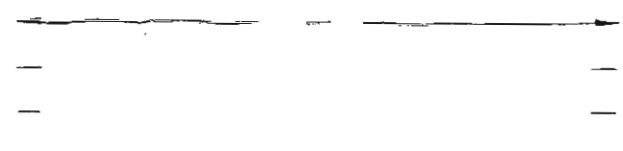
SECTION LINES



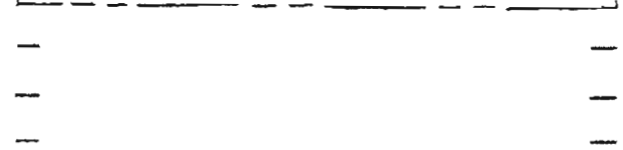
CENTER LINES



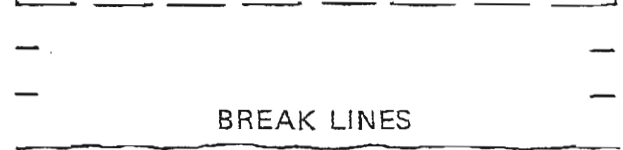
DIMENSION AND EXTENSION LINES



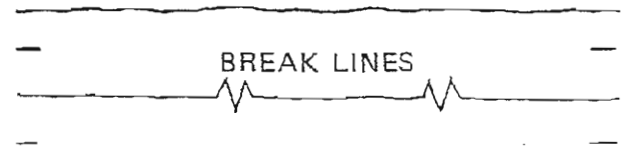
CUTTING-PLANE LINES



ALTERNATE CUTTING-PLANE LINES



BREAK LINES



BREAK LINES



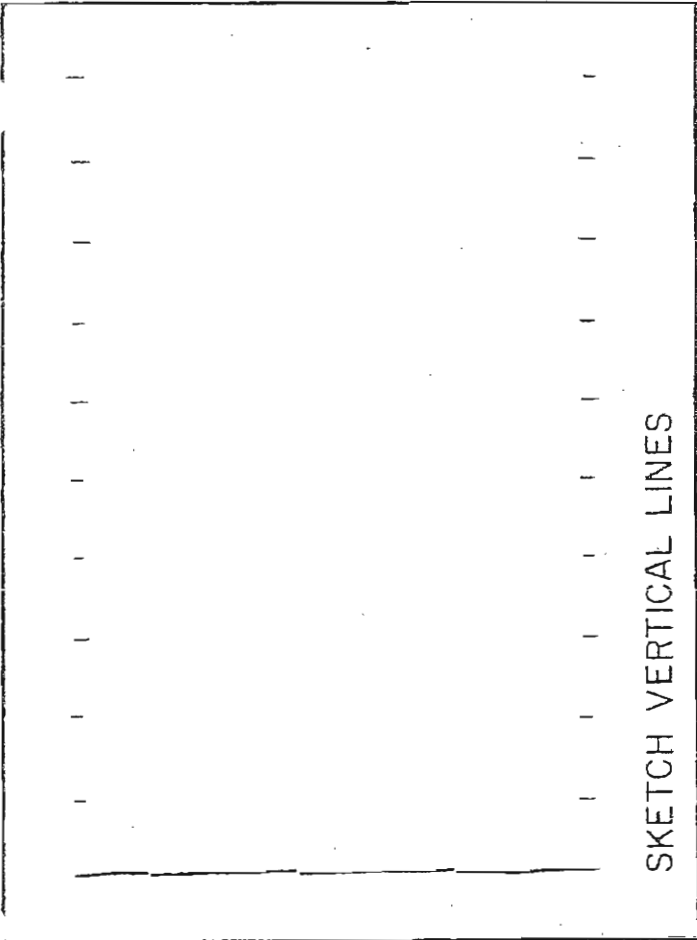
PHANTOM LINES



Title: *Alphabet of Lines*

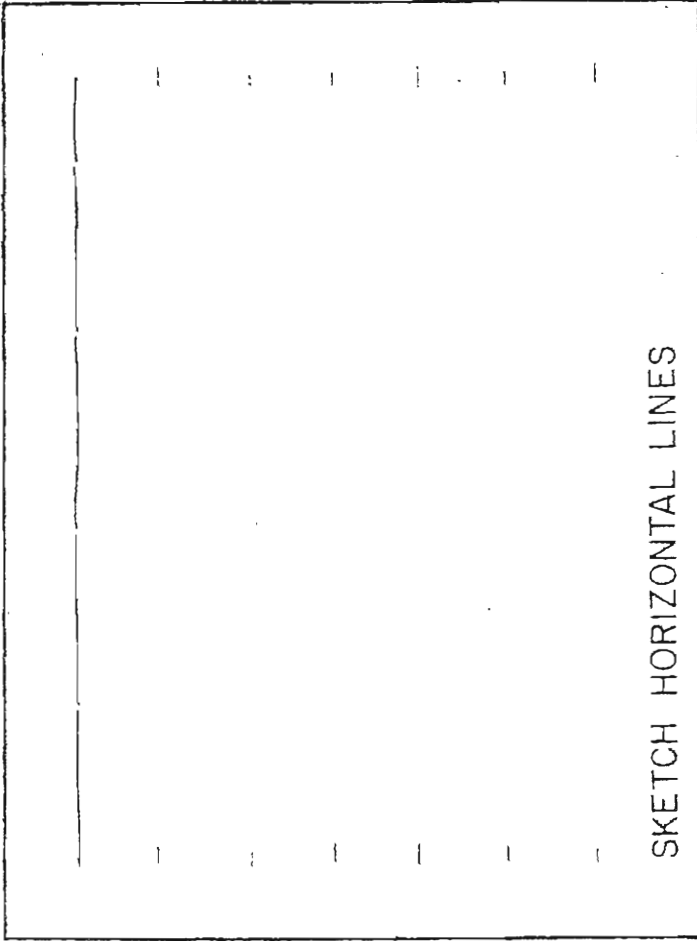
NAME OF SCHOOL

DRAWN BY: _____
DATE: _____



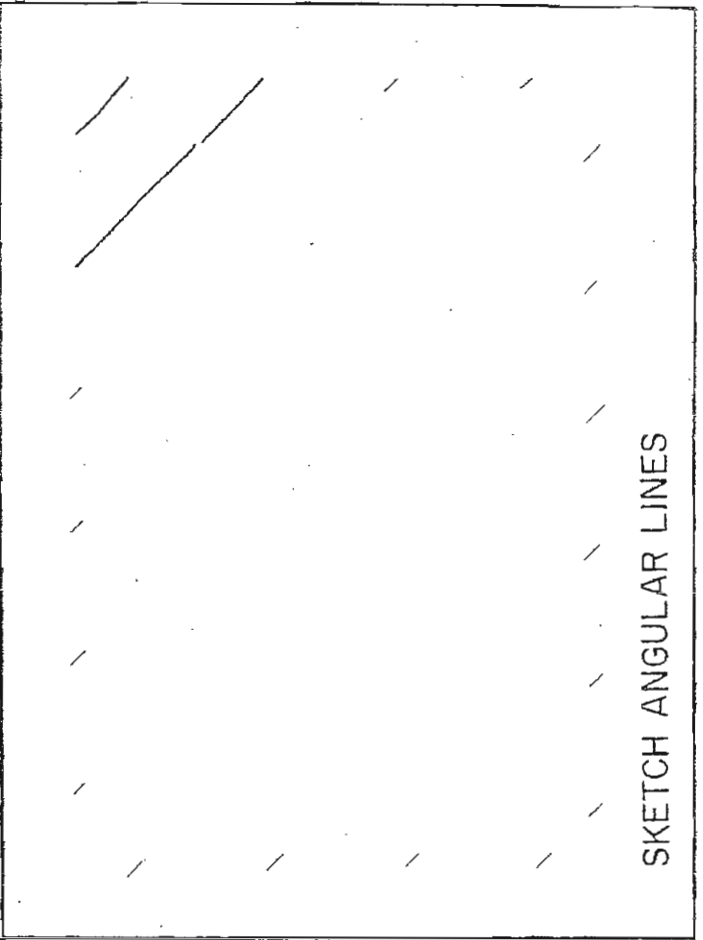
SKETCH VERTICAL LINES

A rectangular box containing a series of vertical lines. The lines are drawn in a sketchy, hand-drawn style. There are approximately 12 lines of varying lengths and positions, some starting from the top and others from the bottom, all generally oriented vertically.



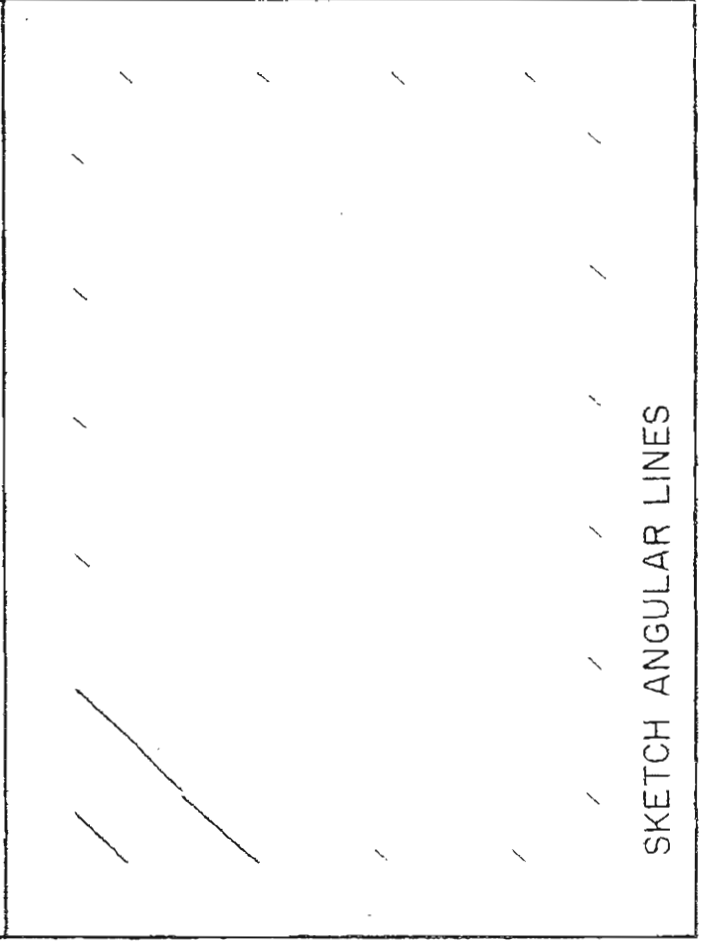
SKETCH HORIZONTAL LINES

A rectangular box containing a series of horizontal lines. The lines are drawn in a sketchy, hand-drawn style. There are approximately 12 lines of varying lengths and positions, some starting from the left and others from the right, all generally oriented horizontally.



SKETCH ANGULAR LINES

A rectangular box containing a series of angular lines. The lines are drawn in a sketchy, hand-drawn style. There are approximately 12 lines of varying lengths and positions, all oriented at various angles (approximately 45 degrees) relative to the horizontal.



SKETCH ANGULAR LINES

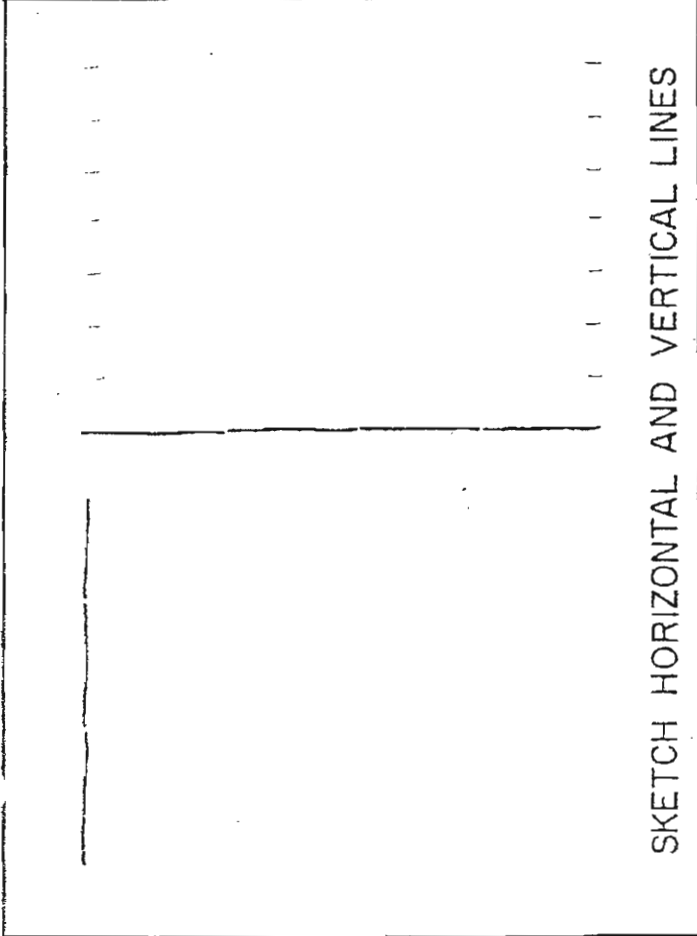
A rectangular box containing a series of angular lines. The lines are drawn in a sketchy, hand-drawn style. There are approximately 12 lines of varying lengths and positions, all oriented at various angles (approximately 45 degrees) relative to the horizontal.

NAME

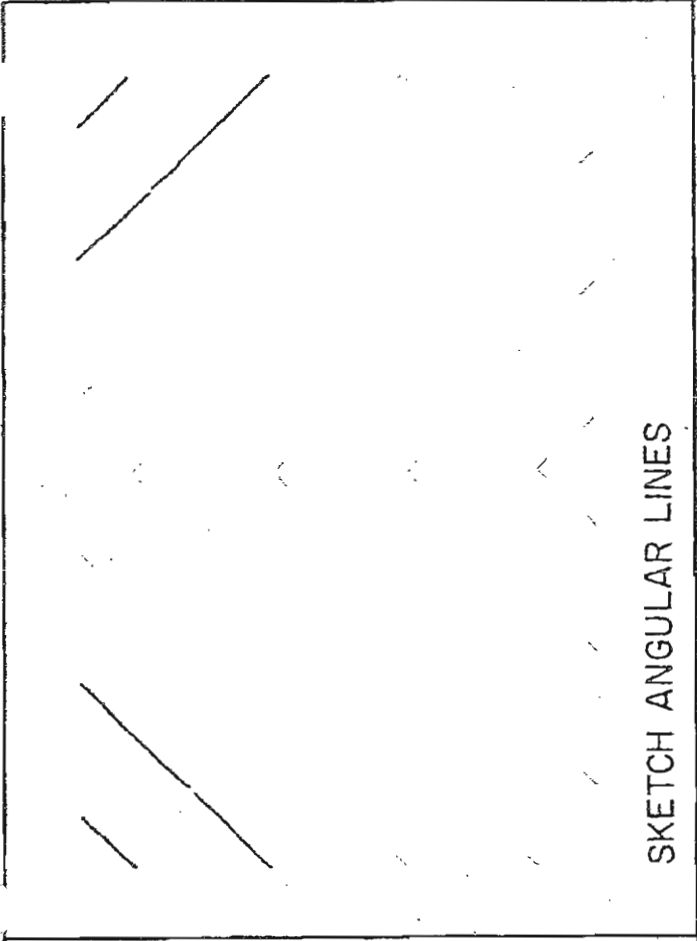
PERIOD

DATE

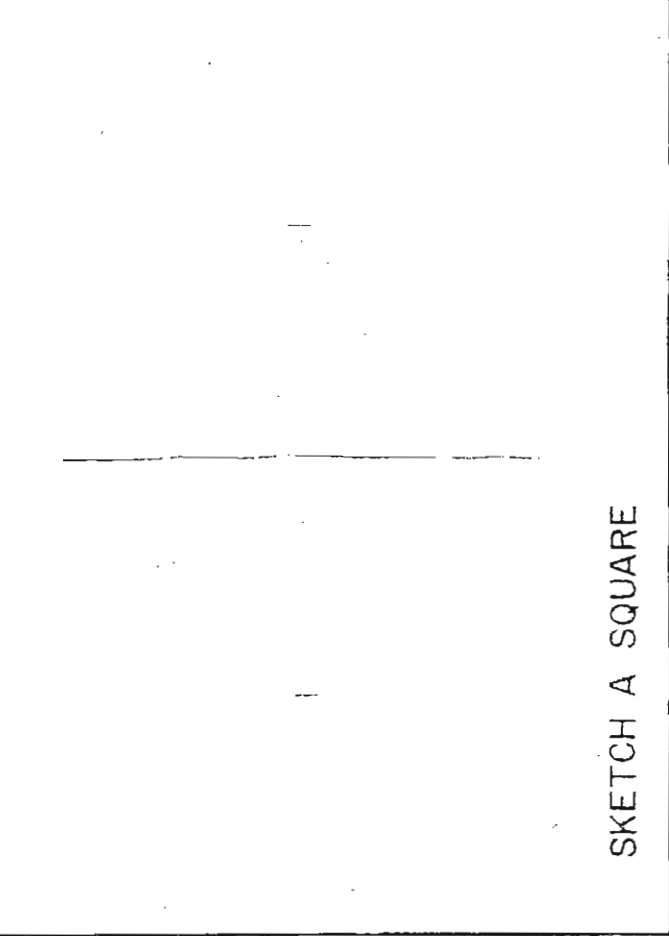
PLATE 2-1B



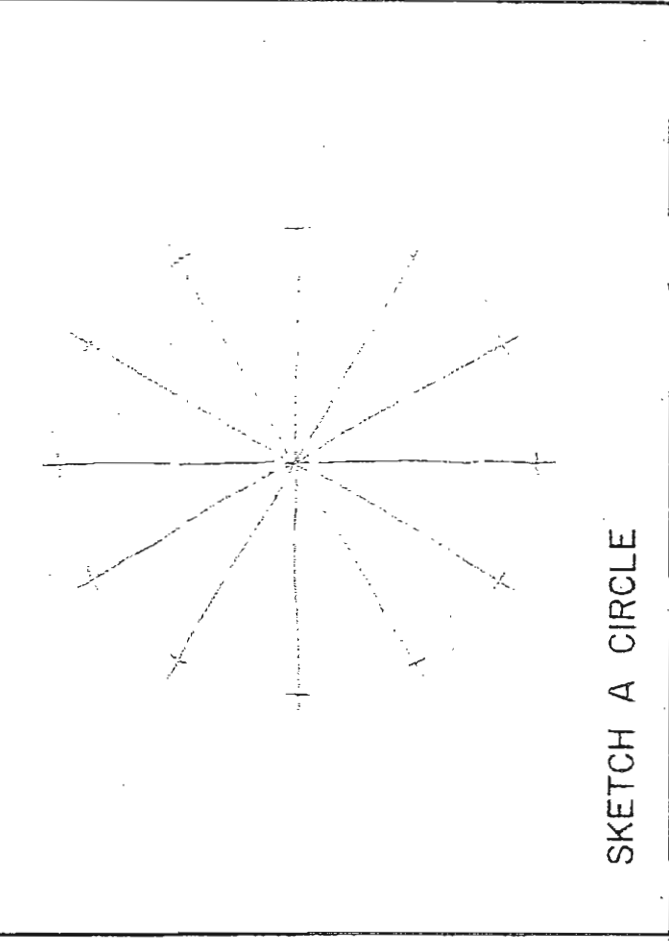
SKETCH HORIZONTAL AND VERTICAL LINES



SKETCH ANGULAR LINES



SKETCH A SQUARE



SKETCH A CIRCLE

NAME

PERIOD

DATE

PLATE 2-1A