

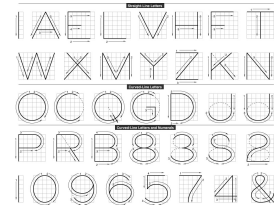
ENGR 150 Engineering Graphics

Text, Line Types and
Sketching

TEXT

• Technical Drawings:

- Title Block
- Revision Block
- Bill of Materials
- Notes
- Dimensions



Bertoline, G.R., Introduction to Graphics Communication for Engineers, 3rd, 2006

RULES FOR LETTERING

1. USE THE SINGLE-STROKE, VERTICAL, GOTHIC STYLE OF LETTERING.
2. USE UPPER CASE (CAPITAL) LETTERS ONLY!
3. ALWAYS SKIP A SPACE BETWEEN ROWS OF LETTERS.
4. ALWAYS USE VERY LIGHT GUIDE LINES.
5. NORMAL LETTERING IS MADE 1/8" OR 3.5 mm HIGH.
6. TITLES SHOULD BE LETTERED 1/4" OR 5 to 7 mm HIGH.
7. FRACTIONS ARE LETTERED TWICE THE HEIGHT OF NORMAL LETTERS.
8. FRACTION BARS ARE ALWAYS DRAWN HORIZONTAL.
9. USE A MEDIUM (B, HB, F OR H) LEAD FOR NORMAL LETTERING.
10. USE A HARD (4H TO 9H) LEAD FOR DRAWING GUIDE LINES.

Title Blocks

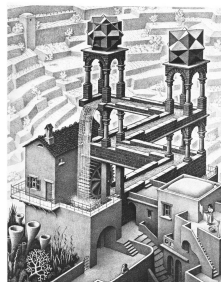
HOW TO FILL OUT A TITLE BLOCK

1. DRAW VERY LIGHT 1/8" HIGH GUIDE LINES USING A 4H OR HARDER LEAD FOR "YOUR NAME", "DATE" & "SCALE".
2. DRAW VERY LIGHT 3/16" & 1/8" GUIDE LINES USING A 4H OR HARDER LEAD FOR THE TITLE "LETTERING EXERCISE".
3. LETTER THE INFORMATION NEATLY USING A "H" LEAD AND SINGLE-STROKE VERTICAL GOTHIC STYLE LETTERING.



Sketching

- Freehand
- Lines
 - Horizontal
 - Vertical
 - Angles
- Arcs and Circles
- Proportions



Waterfall, MC Escher

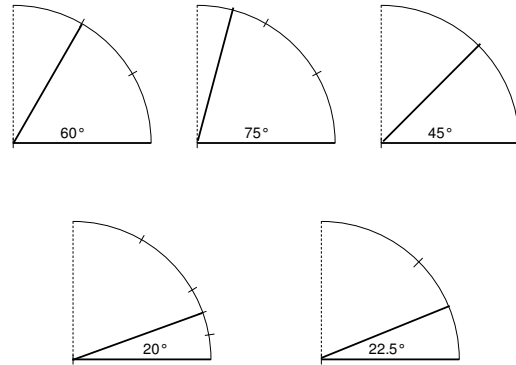
Straight Lines

1. Locate and mark endpoints of line.
2. Position arm by making trial movements.
3. Sketch short, light lines between points. (keep your eye on end point)
4. Darken line to form one continuous line. (eye should lead pencil)

Changing paper orientation helps.

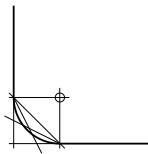
Angles

- Angles may be estimated by subdividing a right angle (90 degrees).
- 15, 30, 45, 60, 75 and 90 degrees – easy.
- 10 degrees
 - Subdivide 90° into thirds.
 - Subdivide 30° into thirds.



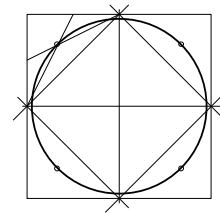
Curve between perpendicular lines

1. Project the two lines until they intersect.
2. Layout the radius from each line completing square
3. Divide square in half
4. Mark triangle centre
5. Sketch arc through corners of square and triangle centre.

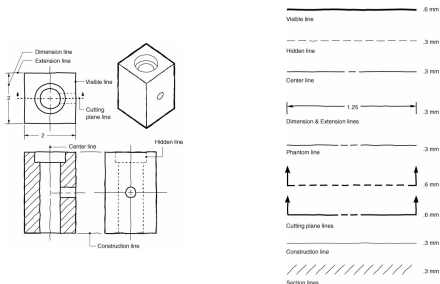


Circles

- fig. 2.13 and 2.14; or
 - "paper compass"; or
1. Draw centre lines
 2. Mark radius on lines
 3. Sketch square
 4. Split each quadrant into two triangles
 5. Locate centre of each outer triangle
 6. Sketch circle.



Alphabet of Lines



Precedence of Lines

