

Figure 11.10 The alphabet of lines varies in width. The full-size lines are shown in the right column along with the recommended pencil grades for drawing them.

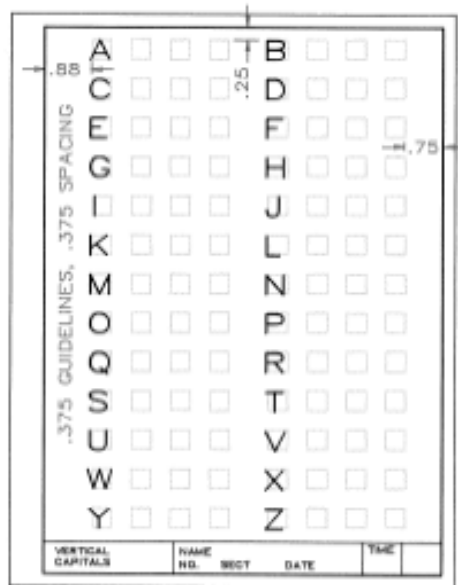


Figure 12.28 Problem 1. Construct each vertical uppercase letter three times.

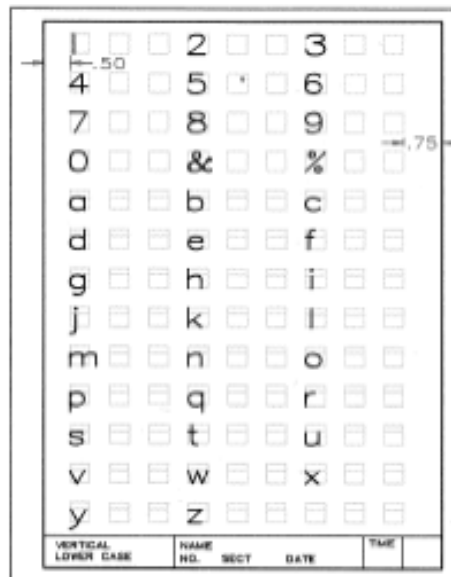


Figure 12.29 Problem 2. Construct each vertical numeral and lowercase letter two times.

5. Construct guidelines for $\frac{1}{2}$ -in. capital letters starting $\frac{1}{4}$ in. from the top border. Each guideline should end $\frac{1}{4}$ in. from the left and right borders. Using these guidelines, letter the first paragraph of the text of this chapter. Use all vertical capitals. Spacing between the lines should be $\frac{1}{4}$ in.

6. Repeat Problem 5, but use all inclined capital letters. Use inclined guidelines to help you uniformly slant your letters.

7. Repeat Problem 5, but use vertical capitals and lowercase letters in combination. Capitalize only those words that are capitalized in the text.

8. Repeat Problem 5, but use inclined capitals and lowercase letters in combination. Capitalize only those words that are capitalized in the text.

12.1 Introduction

All drawings are supplemented with notes, dimensions, and specifications that must be lettered. The ability to construct legible freehand letters is an important skill to develop since it affects the usage and interpretation of a drawing.

12.2 Tools of Lettering

The best pencils for lettering on most surfaces are in the H–HB grade range, with an F pencil being the most commonly used grade. Some papers and films are coarser than others and may require a harder pencil lead. To give the desired line width, the point of the pencil should be slightly rounded (Fig. 12.1); a needle point will break off when pressure is applied.

When lettering, the pencil should be revolved slightly between your fingers as the strokes are being made so that the lead will wear down gradually and evenly. Bear down firmly to make letters black and bright for good reproduction. To prevent smudging your drawing while lettering,

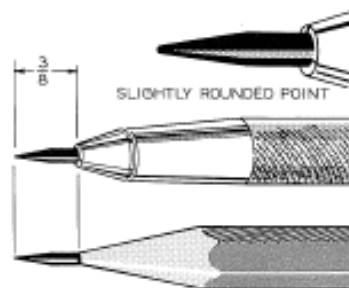


Figure 12.1 Good lettering begins with a properly sharpened pencil point. The point should be slightly rounded, not a needle point. The F pencil is usually the best grade for lettering.

place a sheet of paper under your hand to protect the drawing (Fig. 12.2).

12.3 Gothic Lettering

The type of lettering recommended for engineering drawings is **single-stroke Gothic lettering**, so called because the letters are made with a series