GENERAL INFORMATION:

THE PROBLEMS PRESENTED IN THIS OUTLINE ARE INTENDED TO REINFORCE THE LEARNING OF ORTHOGRAPHIC PROJECTION THEORY AND TO DEVELOP BASIC SKILLS IN FREEHAND SKETCHING. THE PROBLEMS HAVE BEEN DESIGNED TO EMPHASIZE THE SPACIAL RELATIONSHIPS OF POINTS, PLANES AND SOLIDS IN ORTHOGRAPHIC THREE-VIEW SKETCHES AND ISOMETRIC SPACE DIAGRAMS.

INSTRUCTIONS:

A. MATERIALS NEEDED:
   1. TWO ISOMETRIC GRID WORKSHEETS
   2. 2H OR H DRAWING PENCIL.
   3. HANDOUT SHEET SHOWING CORRECT PROBLEM LAYOUT.

B. PROBLEM LAYOUT:
   1. TWO PROBLEMS PER SHEET.
   2. EACH PROBLEM TO INCLUDE:
      a. 3-VIEW ORTHOGRAPHIC SKETCH WITH FOLDING LINES.
      b. ONE ISOMETRIC SKETCH SUSPENDED IN THE SPACE BOX WITH VIEWS ON THE PRINCIPAL PLANES.

C. PROCEDURE FOR LAYOUT:
   1. FROM THE COORDINATE DATA GIVEN IN EACH PROBLEM, LOCATE THE POINTS ON THE PRINCIPAL PLANES OF THE SPACE DIAGRAM. PLACE THE CORRECT NOTATION OF EACH POINT AS THEY ARE LOCATED. INDICATE THE PROBLEM NUMBER.

   2. SKETCH AN OBJECT LINE BETWEEN POINTS ON EACH OF THE PRINCIPAL PLANES. PROJECT INTO THE SPACE BOX AND SKETCH THE ISOMETRIC.

   3. USING THE SAME DATA, SKETCH THE 3-VIEW ORTHOGRAPHIC PROJECTION OF EACH PROBLEM. (LABEL EACH POINT)

   4. BE SURE THIS IS DONE FREEHAND, SHOW ALL PROJECTION LINES AND INCLUDE CORRECT NOTATION FOR THE FOLDING LINES ON EACH PROBLEM.

   5. INDICATE YOUR NAME, DATE AND ROW NUMBER IN THE LOWER RIGHT HAND CORNER OF EACH SHEET.