Math 3370   Exam I   June 8, 1998

Answer the problems on separate paper.   You do <u>not</u> need to rewrite the statements of the
problems on your answer sheets. Work carefully. Show all relevant steps.

Terms & Definitions:

For each of the following terms give a written definition and sketch an example.

1.   Colinear Points   5.   Supplementary Angles
2.   Angle   6.   Corresponding Angles
3.   Polygon   7.   SideSideSide (SSS) Property
4.   Convex Polygon

Problems.

1.   How many lines are determined by four points, no three of which are colinear?
2.   Find the exact angle from the hour hand to the minute hand at 3:45.
3.   Determine which of the following classifications apply to the following figures:
        a. Simple Curve   b. Closed Curve   c. Polygonal Curve
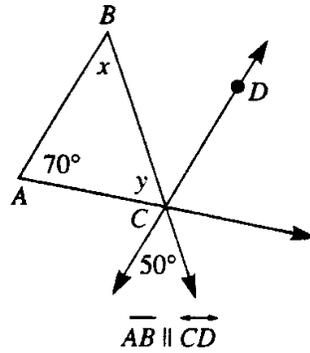   d. Polygon   e. Convex Curve   f. Concave Curve
        g. Convex Polygon   h. Concave Polygon
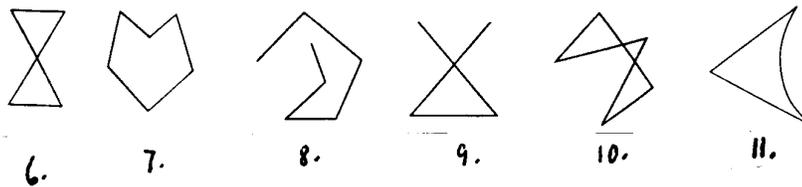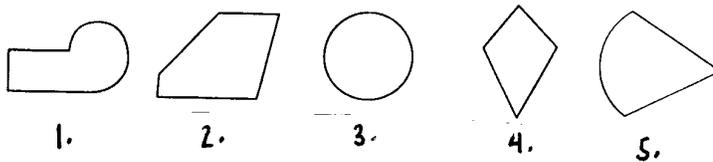
4.   Find the perimeter of the following simply closed curve bounded by semicirlces and line
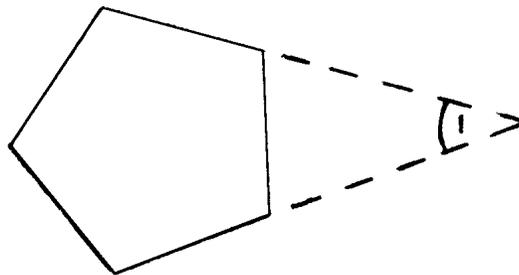   segments.
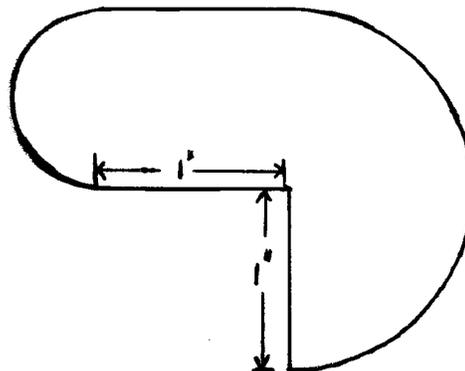
5.   List the following in increasing order.
   a. 8 cm   b. 5218 mm   c. 245 cm   d. 91 mm   e. 6 m   f. 700 mm

6.   In the following figure find the measures of the angles marked x & y:

7.   Two sides of a regular pentagon are extended as shown in the following figure. Find the measure of $\angle 1$.

8.   Refer to the following floor plan. Can a person walk through each door once and only? If so, draw a network which represents the floor plan and indicate a starting point and an ending point. If not so, explain why not.
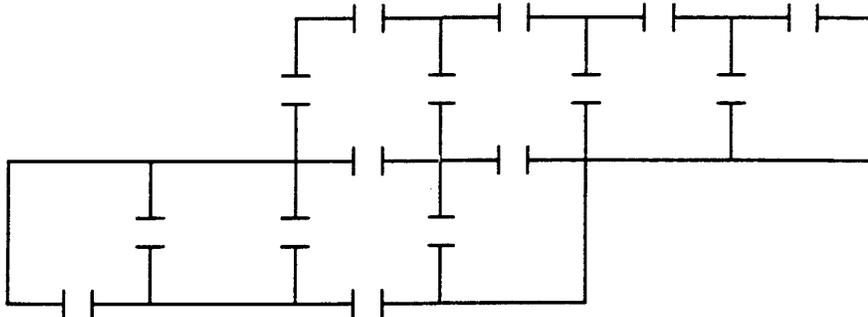
9.   A group of students on a hiking trip wants to find the distance AB across a pond. (See the accompanying figure.) One student suggests choosing any point C, connecting it with B and then find a point D such that $\angle DCB \cong \angle ACB$ and $\overline{DC} \cong \overline{AC}$. How and why does this help in finding the distance AB?