# WORKSHEET 1.1

# Object-Oriented Programming

The following object declarations and initializations will be used for all questions. This code will create a DrawingTool object called *marker* and a SketchPad object called *poster*. The *poster* will have dimensions of 600 x 600, and the *marker* will be constructed and used on the *poster.* Each drawing will begin at the center of the poster at the point (0,0).

DrawingTool marker;

SketchPad poster;

poster = **new** SketchPad(600,600);

marker = **new** DrawingTool(poster);

1. Draw the figure generated by the following code segment:

marker.forward(120);

marker.turnRight(45);

marker.forward(80);

marker.turnLeft(90);

marker.forward(80);

marker.turnLeft(90);

marker.forward(80);

marker.turnLeft(90);

marker.forward(80);

1. Draw lines A and B as described by the following – note the move() method is introduced here for line B. It allows you to draw lines with fewer commands:

marker.up();

marker.turnRight(90);

marker.forward(100);

marker.down();

marker.drawString(" A");

marker.move(-100,0);

marker.up();

marker.move(-175,100);

marker.down();

marker.move(175,100);

marker.drawString(" B");

1. Enhance # 2 by writing code to connect the left endpoint of B to the right endpoint of A. Write additional code to connect the right endpoint of B to the left endpoint of A.

1. Enhance # 2 again by writing code to construct the perpendicular bisector to segments A and B (25 units above B and 25 units below A).