**CMSC 113: Computer Science I**

**Getting Attributes of Shapes**

You will often need to get the current size or location of shapes you have already created. Here is how.

**To get the coordinates of a shape's hotspot:**

Say you have a shape named fido. fido.getX() will be the *x*-coordinate of the shape's hotspot and fido.getY() will be the *y*-coordinate of the shape's hotspot. So, if the shape is a rectangle, oval, or image, these coordinates will be at the shape's upper-left corner; if the shape is a label, these coordinates will be at the shape's lower-left corner; if the shape is a line, these coordinates will be at the shape's start point; and if the shape is a compound, these coordinates will be at the shape's defined hotspot.

For example, say you want spot to move to the location where fido currently is. Use this code:

spot.setLocation(fido.getX(), fido.getY());

This uses fido's current coordinates as the new coordinates of spot.

**To get the coordinates of the endpoint of a line:**

The coordinates of the endpoint of a line stick are stick.getEndPoint().getX() and stick.getEndPoint().getY(). These will be the 3rd and 4th numbers you originally put into stick = new GLine(…);.

**To get the size of a shape:**

To get fido's width and height, use fido.getWidth() and fido.getHeight(). This works the same for any shape.

For example, say you want fido to grow by 5 pixels in both directions. Use this code:

fido.setSize(fido.getWidth() + 5, fido.getHeight() + 5);

This code sets fido to have a width 5 greater than its old width and a height 5 greater than its old height.