Quick Summary of Graphic Objects and Methods

Constructors for Auxilliary Classes

```java
new Color(redness, greenness, blueness);
```
Mix a new color. Parameter values are numbers between 0 and 255.

```java
new Location(x,y);
```
Build a coordinate pair object for the point (x,y).

Accessor Methods for Auxilliary Classes

```java
someColor.getRed()
someColor.getGreen()
someColor.getBlue()
```
Access any of the color values associated with a Color.

```java
someLocation.getX()
someLocation.getY()
```
Access either of the elements of a coordinate pair.

```java
someLocation.distanceTo( anotherLocation )
```
Determine the distance between two points.

Constructors for Graphic Objects

```java
new FramedRect( x, y, width, height, canvas);
```
The parameters to a rectangle or oval constructor describe the rectangle bounding the object to be drawn. You can either:

- Specify the coordinates of the rectangle’s upper left corner together with the width and height, or
- Specify the coordinates of two opposite corners.

```java
new FilledRect( x, y, width, height, canvas);
```
You can fill these shapes or just frame their perimeters.

```java
new FramedOval( x, y, width, height, canvas);
```

```java
new FilledOval( x, y, width, height, canvas);
```

```java
new FramedRect( corner1Location, corner2Location, canvas);
```

```java
new FilledRect( corner1Location, corner2Location, canvas);
```

```java
new FramedOval( corner1Location, corner2Location, canvas);
```

```java
new FilledOval( corner1Location, corner2Location, canvas);
```

```java
new FramedRect( cornerLocation, width, height, canvas);
```

```java
new FilledRect( cornerLocation, width, height, canvas);
```

```java
new FramedOval( cornerLocation, width, height, canvas);
```

```java
new FilledOval( cornerLocation, width, height, canvas);
```

```java
new Line( startX, startY, endX, endY, canvas);
```
A line is described by giving its end points.

```java
new Line( startLocation, endLocation, canvas);
```

```java
new Text( "some message", x, y, canvas);
```

```java
new Text( "some message", baseLocation, canvas);
```
The coordinates specify the left-most point of the text’s baseline.
Methods Available for All Graphic Objects

someObject.move( xOffset, yOffset);
Move an object relative to its current position.
someObject.moveTo( x, y);
someObject.moveTo( someLocation);
Move an object to point specified by coordinates.
someObject.contains( someLocation);
Determine if an object’s bounding box contains a point.
someObject.hide();
someObject.show();
Make an object invisible or visible on the display.
someObject.removeFromCanvas();
Delete object from its canvas.
someObject.sendForward();
someObject.sendToFront();
someObject.sendBackward();
someObject.sendToBack();
Alter the stacking order that controls how overlapping objects appear.
someObject.getColor();
someObject.setColor( someColor );
Access or change an object’s color.

Methods Available for All 2-D Graphic Objects (including Text, but not Line)

someObject.getX();
someObject.getY();
someObject.getLocation();
Access coordinates of the upper left corner of an object’s bounding rectangle.
someObject.getWidth();
someObject.getHeight();
Access the dimensions of an object’s bounding rectangle.

Methods Available for Resizable 2-D Graphic Objects (not Text)

someObject.setWidth( newWidth);
someObject.setHeight( newHt);
Change the dimensions of an object’s bounding rectangle.

Mutator Methods for Lines

someLine.setStart( someLocation );
someLine.setEnd( someLocation );
someLine.setEndPoints( startLocation, endLocation );
Change either or both of a line’s end points.
Mutator Methods for Text Objects

someText.setText( "new message" );  
Change the characters displayed.
someText.setFontSize( pointSize );  
Change the font size used.
someText.setBold();  
Change the style in which text is displayed.
someText.setItalic();
someText.setPlain();
someText.setFont( someFont )  
Change the font used.

DrawingCanvas methods

canvas.getWidth();  
Return the canvas width or height as an int.
canvas.getHeight();
canvas.clear();  
Remove all objects from the canvas.