

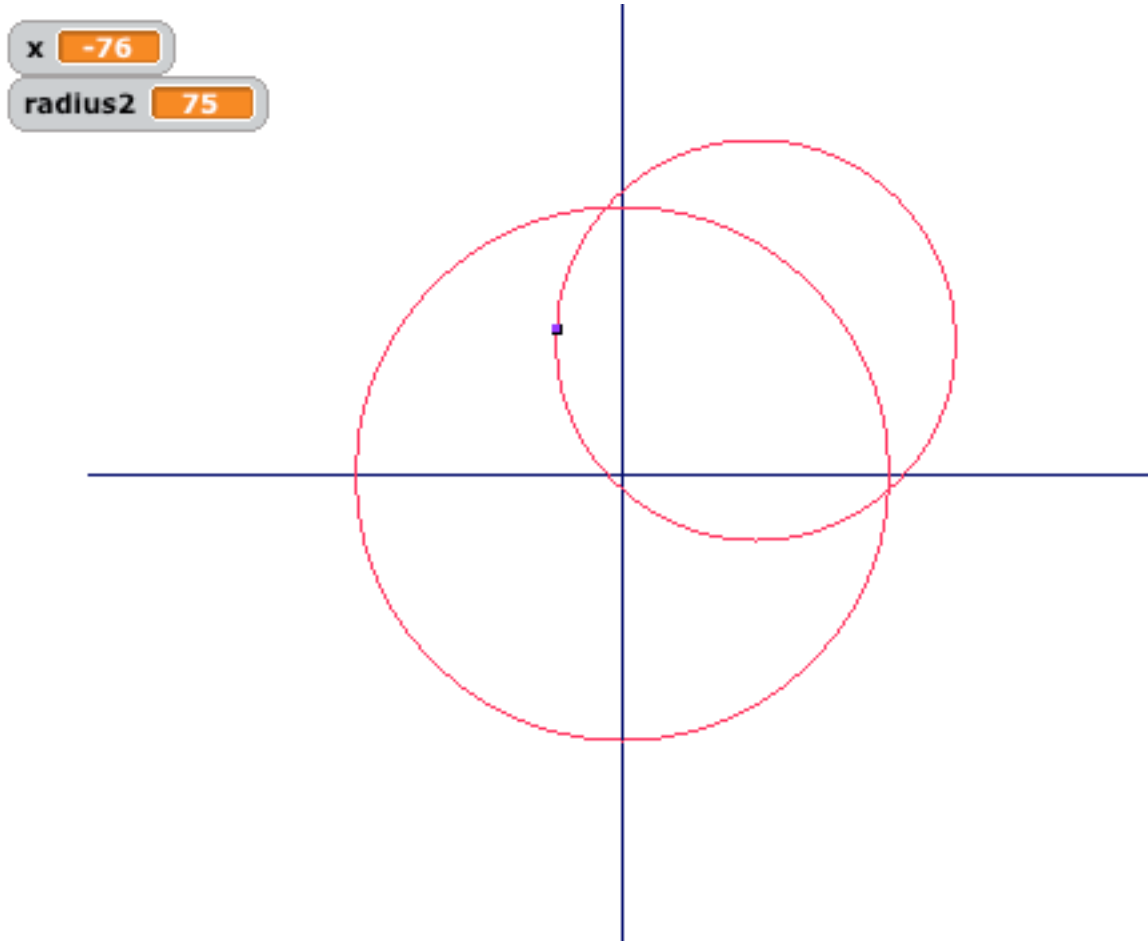
This page is useful for finishing assignment #4; specifically the following demonstrates how to draw a circle that has a center that is "offset" from (0,0).

This first program, below, draws two overlapping circles; one of the circles has a center that is located at (0,0), the other at (50,50):

```

when clicked
set pen color to blue
pen up
clear
go to x: -200 y: 0
pen down
go to x: 200 y: 0
pen up
go to x: 0 y: 205
pen down
go to x: 0 y: -205
set pen color to red
pen up
set radius1 to 100
set x to -1 * radius1
repeat radius1 * 2
  set y to sqrt of radius1 * radius1 - x * x
  go to x: x y: y
  change x by 1
  pen down
set x to radius1
repeat 201
  set y to -1 * abs of sqrt of radius1 * radius1 - x * x
  go to x: x y: y
  change x by -1
set radius2 to 75
set x to -1 * radius2
pen up
repeat radius2 * 2
  set y to sqrt of radius2 * radius2 - x * x
  go to x: x + 50 y: y + 50
  change x by 1
  pen down
set x to radius2
repeat radius2 * 2 + 1
  set y to -1 * abs of sqrt of radius2 * radius2 - x * x
  go to x: x + 50 y: y + 50
  change x by -1
  
```

Sample run:



Notes:

1. The easiest way to handle drawing a circle whose center is not at (0,0) is to simply offset x and y when plotting the circle as shown above, specifically:

```

pen up
repeat radius2 * 2
  set y to sqrt of radius2 * radius2 - x * x
  go to x: x + 50 y: y + 50
  change x by 1
  pen down
  
```

Compare the code fragment above that draws a circle with center at (50,50) versus the code fragment below, where the center of the circle is at (0,0):

```

repeat radius1 * 2
  set y to sqrt of radius1 * radius1 - x * x
  go to x: x y: y
  change x by 1
  pen down
  
```

Specifically note that the "go to x: (X + 50) y: (y + 50)" differs from the code directly above where the command is simply "go to x: x y: y"; put another way, the center of the smaller circle has a center of (50,50), hence the addition of 50 to both x and y.