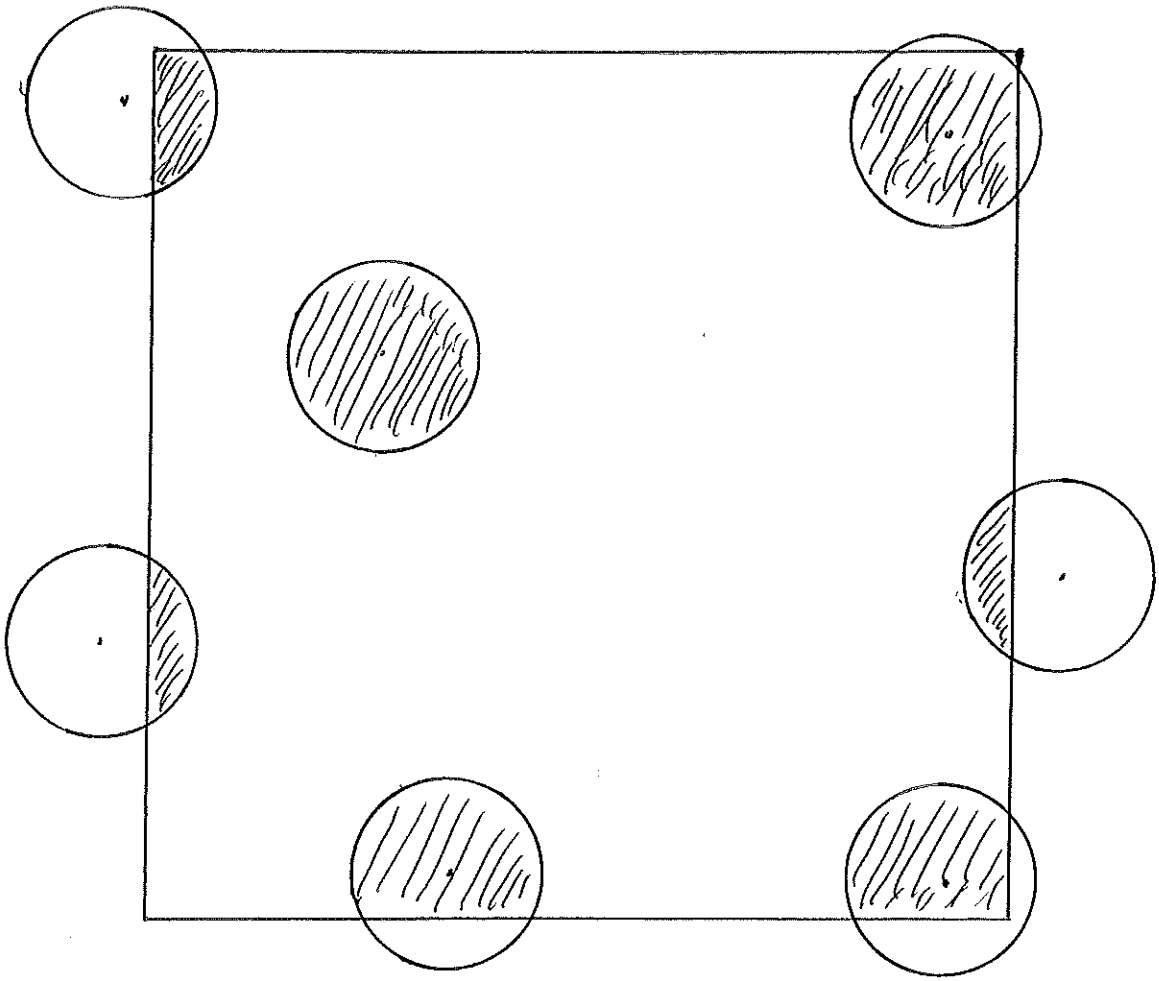
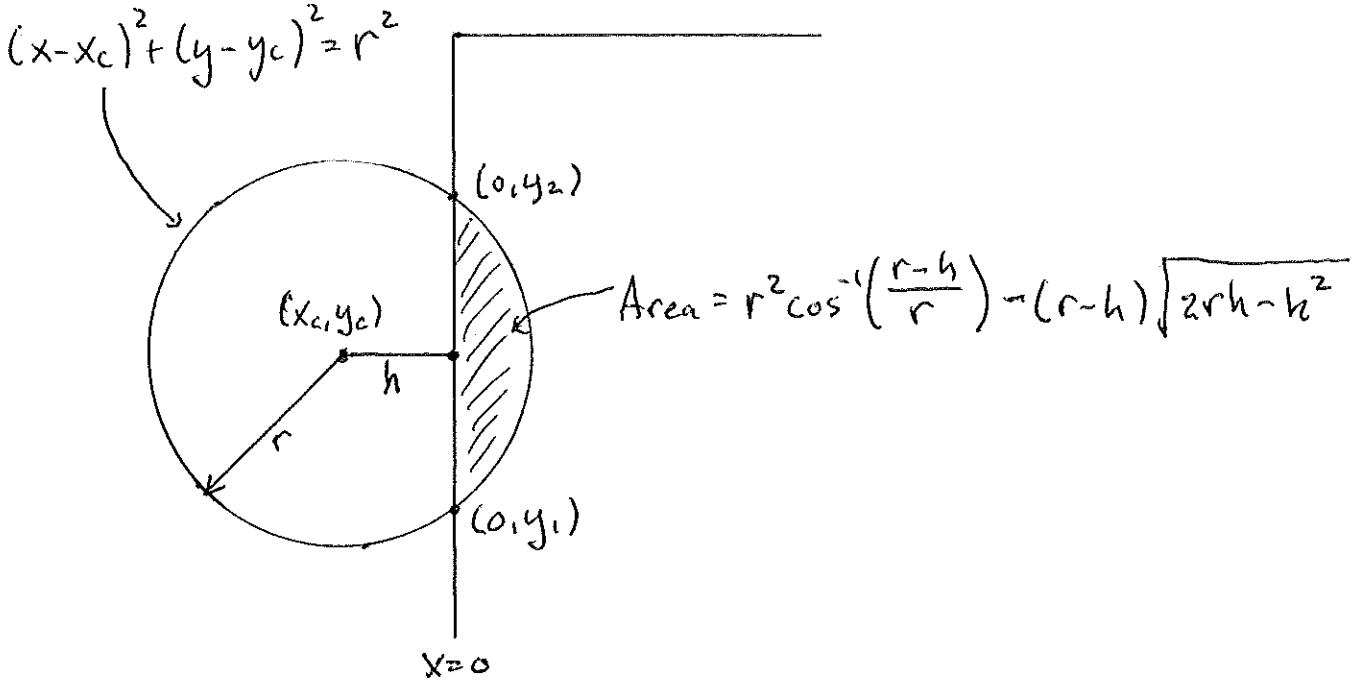
Helpful Hints (Hopefully)

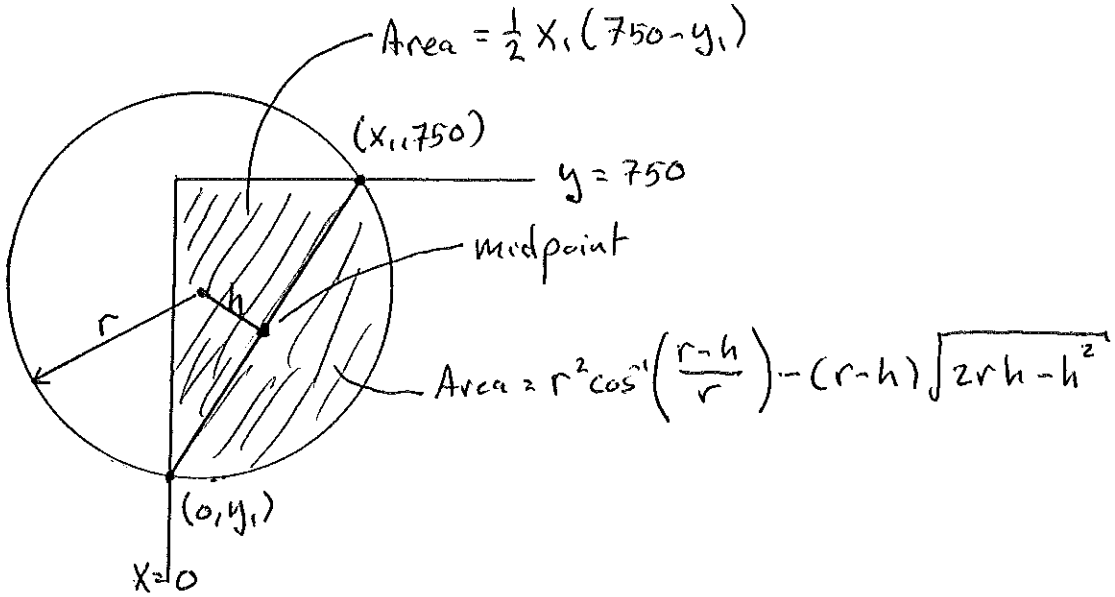
For Parts 2 and 3 of this project, you will need a function that takes a circle center and radius as input, and returns the area of overlap of the circle with the stand of trees. Examples are shown below.



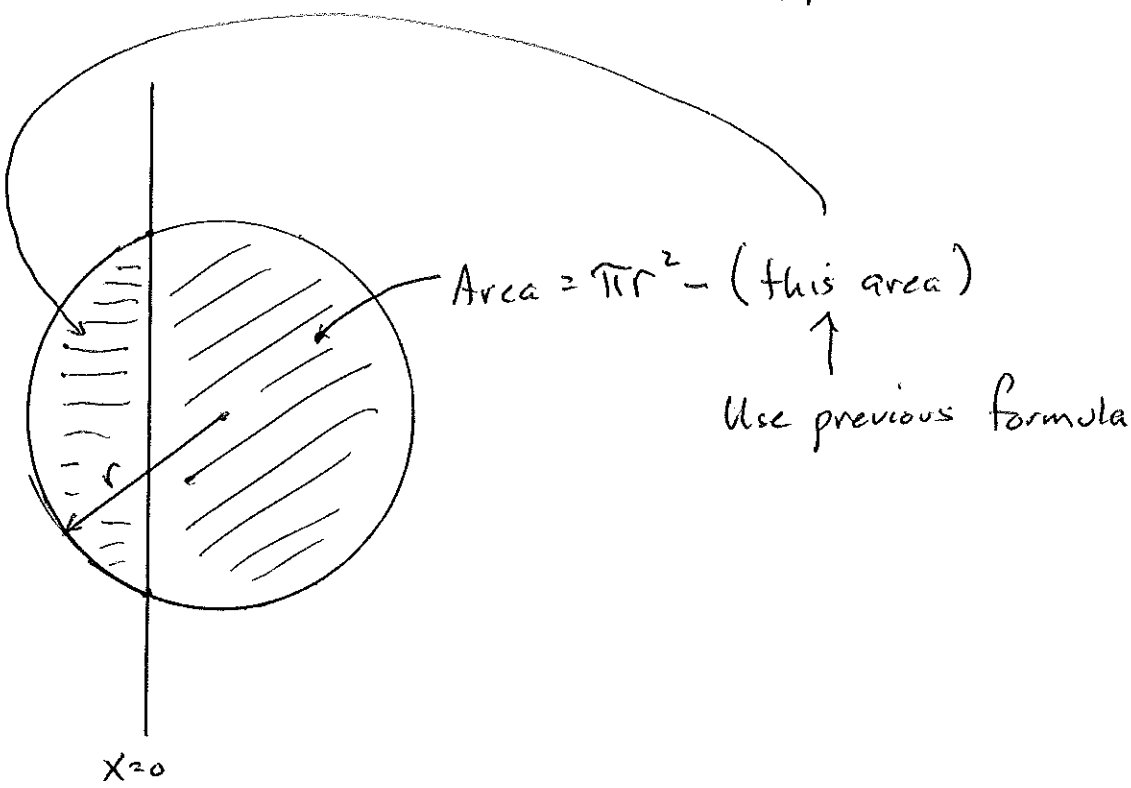
Your overlap function will probably need to deal with many cases. A useful starting point is the formula for a circular segment shown below



The corners are more complicated, but can be viewed as a combination of circular segment and triangle, as shown.



Sometimes the difference between the total area and a circular segment is the easiest approach.



The file "area-check.csv" contains the overlap areas for 10,000 plots of radius r=37. You can use this data to verify the correctness of your overlap area function.