Section 4.4-4.6 & 7.1-7-2 Exam

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_\_\_

Show all work neatly and clearly. You will be graded on your completeness and ability to derive the correct answer.

1.  2.  3. 

4.  5.  6. 

7.  8. 

Find 

9.  10. 

11. Find the average value of the function over the given interval and all values x in the interval for which the function equals its average value



12. Sketch and shade the enclosed figure. Find the area of the region bounded by the graphs of the equations.



13. Find the volume of the solid generated by revolving the region bounded by the graphs of the equations  about the line y = 10

**\*BONUS Problem:** Write the integral that would give the volume of the solid whose base is bounded by the circle  and the cross section perpendicular to the x-axis are squares.