- **Section 5.4 Arclength**

#5 easy!!! - do it using the integral, not geometry, for practice
#6 simplify the expression inside the square root and you will find that you know the antiderivative
#7 You can find the antiderivative; similar to second example done in class
#9and/or #13 Yes you can find the antiderivative, but it will take a little work. Expand the expression inside the square root, simplify it and factor it again as a perfect square. Both use the same trick. If you get it, it may be enough to do only one of these; do both if you need extra practice.
#19, 15 You can not find the antiderivative, so set up the integral and then and figure out how you would set up a numerical integration (any method, any number of intervals, just be sure you know how to do something to estimate the definite integral). If you get it, it may be enough to do only one of these; do both if you need extra practice.
Additional problem y = (2x-1)^(3/2) on the interval [1/2, 4]. This is another substitution problem, similar to the second example we did in class. Be sure you know how to do the problems involving substitution.

- **Section 5.4 Surface Area**

#42 You can evaluate this integral exactly.
Additional Problem: y = x^3 on [0,1] revolve about the x axis. You can evaluate this integral exactly.
35, 39, 41: You should be able to set up the integral for 35, 39, 41. You can not find the antiderivatives. (These problems would require numerical integration. Just be sure that you would know how to use a numerical integration method to find the surface area.)