Calculus: Homework
3/12-3/16

on: Monday: test

due: Thursday:

Use the trapezoidal rule to approximate the following definite integrals:

1. $\int_0^3 (x^2 - 6x + 9)dx$ with *n*=3. 2. $\int_1^9 (x^3 + 2)dx$ with *n*=4.

Friday: read: pp. 519-520

1. Find the domain of the function $f(x) = \ln(x^2 - 1)$.
2. For what values of *x* is $ln(3x - 7) > 0$?
3. If $\int_1^7 lnxdx$ is approximated using the trapezoidal rule with three equal subdivisions on the x-axis, what is this approximation?
4. With $\Delta t = .1$, use the trapezoidal rule to approximate: a. $ln1.2$ b. $ln.5$

Monday: read pp. 521-522

1. pg. 527 / #10, 15, 16, 17, 18
2. Find y': a. $y = \ln(5x^7 - 4x^3 + 6)$ c. $y = ln^5(tan3x)$
   b. $y = ln\left(\frac{2x+1}{x-3}\right)$ d. $y = ln(x^2 - 4x + 2)^3$
3. If $f(x) = xlnx^2$, find $f'(x)$.
4. If $f(x) = ln\sqrt{x}$, find $f''(x)$.