

# Math 120 B and C Fall 2011 Final Exam

**Final Time:** Saturday, December 10<sup>th</sup>  
5:00-8:00pm

**Location:** KANE 130 (Largest room in Kane)

**Rules:** Allowed a scientific calculator  
Allowed one 8.5 by 11 inch sheet of  
handwritten notes (front and back).  
You'll write your answers on the  
exam. Bring some form of ID.

**Length:** 8 questions over 8 pages.  
So it is twice the length of a midterm,  
but you have 3 hours. That is more  
than triple the time compared to a  
midterm.  
That gives you 22.5 minutes per page.  
You should use your time effectively  
some students still manage to use the  
entire time, but I hope that time is  
not a major factor.

**Modeling:** Linear, Quadratic, Linear-to-linear, Exponential, Sinusoidal, Linear motion, Circular motion.

**Function Basics:** Functional notation, composition, multipart functions, inverses/solving, graphs, shifting, dilating, reflecting, algebra, and solving a system of equations.

**Problem Solving Basics:** Unit conversion, rates, linear speed =  $\text{dist}/\text{time}$ , distance formula  
angular speed =  $\text{angle}/\text{time}$ , quadratic formula, drawing a picture, introducing variables, finding intersections.

**Trig Basics:** Understanding angles, radians and degrees,  $v = wr$ , belt-and-wheel type problems, arc length, using trig to find ratio around triangles, using trig to find locations on circles, know the graphs of the trig functions, inverse trig and the sine wave.