

## Math 120 – Week 3 Assignments Spring 2003

### Monday February 3: *Class 6*

Accumulation Functions. How to graphically represent accumulation functions.

Homework:

Quiz #2: Evaluating definite integrals using areas  
Due in *Class 7*

### Wednesday February 5: *Class 7*

Accumulation Functions as Antiderivatives. By graphing specific types of accumulation functions we shall notice connections between an accumulation function's derivative and the function being accumulated. Also how to use differences in accumulation function values to evaluate definite integrals.

Homework: #4 (4 points)

Consider the functions  $f(x) = 2$  and  $g(x) = 3$  and  $h(x) = -1$ . Sketch the graphs of the associated accumulation functions  $F(\mathcal{X}) = \int_0^{\mathcal{X}} f(x)dx$  and  $G(X) = \int_0^{\mathcal{X}} g(x)dx$  and  $H(\mathcal{X}) = \int_0^{\mathcal{X}} h(x)dx$ .

Also write down expressions for  $F$ ,  $G$  and  $H$  which only involve  $\mathcal{X}$   
Due in *Class 8*

### Thursday February 6 : *Lab 2*

Functions Gateway

Investigations into anti-derivatives of well-known functions.

### Friday February 7: *Class 8*

The Definite Integral. We shall recall the formal definition of the definite integral and investigate its algebraic properties.

Homework:

Quiz #3: Evaluating Definite Integrals using Antiderivatives  
Due on Monday in *Class 9*