

1

Day 40 is Tuesday, April 23, 2013

Your course Packet has the correct final exam time.

Wednesday, May 1, 10:10am - 12:10 pm in Morton 237

The Class Web Page has the wrong time listed, but I will fix it today.

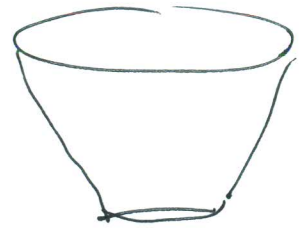
Section 7-2 Applications in Business & Economics

You do not need to read pages 421 & 422 in book, because we are not covering "Probability Density Functions."

Your reading starts on p. 423 "Continuous Income Stream"

General Idea of continuous income stream problems.

You have a big bucket for holding money.

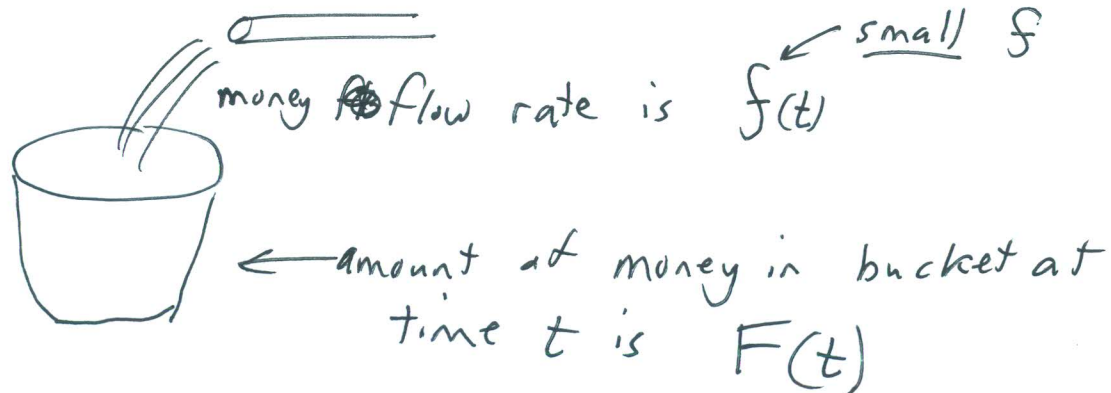


The amount of money in the bucket at time t is $F(t)$

↑ capital F

The bucket starts out empty. So $F(0) = 0$.

Money starts flowing out of a pipe and into the bucket.



Observe that $f(t) = F'(t)$

In "Flow Rate" problems, we know that $F(0)$

and we are given $f(t)$ the flow rate.

↑
capital

↑
small

We are asked to find $F(t)$ at some later time $t = b$. That is, we need to find $F(b)$

The pertinent equation is the Fundamental Theorem of Calculus,

$t = b$

$$\int_{t=a}^{t=b} f(t) dt = F(b) - F(a)$$

$t = a$

