Math 152 – Spring 2016 – In-class Group Assignment 12 – March 21, 2016.

The rate of excretion of a drug from an experimental mouse at time t minutes following infusion of the drug is given by

$f'(t) = 0.01e^{-0.01t}$ measured in mg/min.

(a) Find an expression for f(t)

(b) If no excretion has occurred by time t=0, how many mg of the drug have been excreted by 10 minutes?

(c) What is the average excretion rate over the first 10 minutes after infusion of the drug?

(d) Can you tell how much drug was infused into the mouse? What assumptions have you made to estimate this?