Classwork 9 College Algebra and Trigonometry, MTH 123, Section 3260, Fall 2011 Instructor: Abhijit Champanerkar Oct 26th 2011

Name: _

1. Radioactive iodine is used by doctors to diagonize thyroid gland disorders. This type of iodine decays such that the mass reamining after t days is given by

 $m(t) = 6e^{-0.087t}$

where m(t) is measured in grams.

- Find the mass at time t = 0.
- How much of the mass remainds after 20 days ?

- 2. You want to invest \$40,000 in an account offering the following options:
 - 8.5% per year, compunded semiannually.
 - 8.25% per year, compounded quarterly.
 - 8% per year, compounded daily.

Which option would you choose to maximize your investment after 2 years. (Use back side of the paper if needed).