

**Mathematics 122 Quiz #9**

Name: \_\_\_\_\_

Define a function  $P(t)$  by

$$P(t) = 14(.95)^t$$

Then answer the following:

1. What is the halving time for this function. (That is how long before there is only half as much as when  $t = 0$ ?)  
\_\_\_\_\_

2. What is the average rate of change of  $P(t)$  between  $t = 1$  and  $t = 1.1$ ?  
\_\_\_\_\_

3. What is the average rate of change of  $P(t)$  between  $t = 1$  and  $t = 1.01$ ?  
\_\_\_\_\_

4. What is the the average rate of change of  $P(t)$  between  $t = 1$  and  $t = 1.001$ ?  
\_\_\_\_\_