

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Hour: \_\_\_\_\_

## Exponential Growth and Decay Practice Assignment #4

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1. At your local bank, you deposit \$1500 in a savings account that pays 5% interest each year. How much money will you have after 10 years?
2. The mice population is 25,000 and is decreasing by 15% each year. Write an exponential model for this situation. What will be the mice population after 3 years?
3. The number of mosquitoes at the beach has **tripled** every year since 1999. In 1999, there were 2,500 mosquitoes. Write an exponential model for this situation. How many mosquitoes would you predict were at the beach in 2005?
4. Given the exponential model  $y = 200(.80)^x$ , tell whether the model represents exponential growth or decay. Then, tell what the growth/decay factor is and the growth/decay percent.
5. I bought a car for \$25,000, but its value is depreciating at a rate of 10% per year. How much will my car be worth after 8 years?