Name _____                                    Date _____
Mr. Schlansky                                        Algebra II

# *Finding Exponential Rate*

1. A bank account opened up 3 years ago with an initial balance of $12000 now has a balance of $12824. Find the annual growth rate, to the *nearest tenth of a percent*.

2. Jack bought a new car in 2010 for $16100. In 2018, the car is now worth $6125. What is the annual rate of decrease to the *nearest percent*?

3. A collectible toy was bought 15 years ago for $5 and is now worth $42. Find the annual growth rate to the *nearest tenth of a percent*.

4. A colony of 120 timberwolves increased to 245 over a 6 year span. Assuming exponential growth, what was the annual growth rate to the *nearest percent*?

5.  The principal value of a loan is $424,100. If there is $110,000 remaining on the loan after 19 years, what was the annual rate of decrease to the *nearest tenth of a percent*?

6.  An endangered species has dropped from 937 animals to 375 animals over the past 8 years. What is the annual rate of decrease rounded to the *nearest percent*?

7. A house purchased 5 years ago for $100,000 was just sold for $135,000.  Assuming exponential growth, approximate the annual growth rate, to the *nearest percent*.

8. Over the past 4 years, the value of a stock increased from $1200 to $2300. What is the *monthly* growth rate, rounded to the *nearest tenth of a percent*?