

Name _____ Mr. Schlansky Date _____ Algebra II

Creating and Solving Simple Exponential Functions

1. Cassandra bought an antique dresser for \$500. If the value of her dresser increases 6% annually, what will be the value of Cassandra's dresser at the end of 3 years to the *nearest dollar*?

2. A certain car depreciates at a rate of 15% each year. If the car was initially worth \$8125, what is the value of the car, rounded to the nearest cent, 11 years later?

3. Cameron invests \$1,227 in stocks and her money increases by 9% each year. What will be the value of her investment 18 years later?

4. Kathy plans to purchase a car that depreciates (loses value) at a rate of 14% per year. The initial cost of the car is \$21,000. What is the value of the car after 3 years rounded to the nearest cent?

5. Marissa deposits \$2000 into a bank account with pays an annual interest rate of 4.6%. How much money, to the nearest cent, will she have in the account after 8 years?

6. A bank is advertising that new customers can open a savings account with a 3.75% interest rate compounded annually. Robert invests \$5,000 in an account at this rate. If he makes no additional deposits or withdrawals on his account, find the amount of money he will have, to the *nearest cent*, after three years.

7. The value of a truck bought new for \$28,000 decreases 9.5% each year. Write an exponential function to represent this function and predict the value of the truck to the nearest cent after 10 years.

8. A car worth \$20,000 depreciates at a rate of 8.75% each year. Find the value of the car after 11 years to the nearest cent?

9. Jeff deposits \$8750 into a bank account with pays an annual interest rate of 1.5%. How much money, to the nearest cent, will he have in the account after 12 years?

10. A car worth \$41,235 depreciates at a rate of 11.5% each year. Find the value of the car after 7 years to the nearest cent?