

Logarithm Modeling HW

1. The population of a certain animal species decreases at a rate of 3.5% per year. You have counted 95 of the animals in the habitat you are studying. When does the habitat house 72 animals?
2. A computer valued at \$6500 depreciates at a rate of 12.2% per year. When does the computer cost \$3300?
3. A car depreciates at a rate of 13% per year. The car is worth \$11,900 after 10 years of ownership. What was the initial value of the car?
4. A basketball card was bought for \$150 in 2001 and sold for \$550 in 2015. What was the rate of increase for the basketball card?
5. Your bank is offering a savings account with a rate of 1.5% compounded continuously. If you deposited \$1,000, how long will it take for you to save \$2500?
6. You invest \$2000 compounded continuously. If it takes you 5 years to save \$5000, what is your interest rate?