

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

## Applications

1.) Kay invests \$5,000 for years into an account compounded continuously at a rate of 4.5%. What is the balance after 6 years?

2.) Ted wants to triple his money. It is in an account that pays 5% interest compounded continuously, how long will it take to triple his money?

3.) Jose's car depreciates at a rate of 12% per year. He bought his car three years ago for \$25,000, how much is it worth today?

4.) Aneisha deposited \$7,000 into an account paying 3.5% interest compounded semi-annually. If she leaves her money in the account for four years what would be her account BALANCE?  
(Balance – initial investment plus interest)

5.) A radioactive sample has a half-life of 3 **years** and has an initial mass of 68 grams. How many **months** will it take the sample to lose 8 grams?

6.) The population of a town triples every 6 years. If 4000 people are present in 2016, how many people will be in the town in 2026?