6-5 Exponential Growth / Decay Worksheet Name: \_\_\_\_\_

- 1. You start an account with \$500 and an interest rate of 6% compounded yearly. How much is in the account after 3 years?
  - a) Exponential growth or decay:
  - b) Identify the initial amount:
  - c) Identify the growth/decay factor:
  - d) Write an exponential function to model the situation:
  - e) "Do" the problem:

- 2. From 2000 2010 a city had a 2.5% annual decrease in population. If the city had 2,950,000 people in 2000, determine the city's population in 2008.
  - a) Exponential growth or decay:
  - b) Identify the initial amount:
  - c) Identify the growth/decay factor:
  - d) Write an exponential function to model the situation:
  - e) "Do" the problem:

## Remember: a) Exponential growth or decay:

- b) Identify the initial amount:
- c) Identify the growth/decay factor:
- d) Write an exponential function to model the situation:
- e) "Do" the problem:
- 3. You buy a car for \$8000 that depreciates at a rate of 11% a year. How much is the care worth after 5 years?

4. You start an account with \$2500 and an interest rate of 6.5% compounded yearly. How much is in the account after 7 years?

5. A newly hatched channel catfish typically weighs about 0.06 gram. During the first 6 weeks of life, its weight increases by about 10% each day. Write a function to model the situation. How much does the catfish weigh after 6 weeks?