HOMEWORK QUIZ – Exponential Modeling

Name

Date: Form A

1. Is the function $P(t) = 4.3\ (1.08)^t$ a growth or decay function? What is the constant percentage rate?

2. Write the exponential function with initial mass of 24 grams, decreasing at a rate of 5% per day.

3. The population of Smallville in the year 1990 was 6500. The population increased at a rate of 5% per year. Estimate the population in 2010.

Grade:

HOMEWORK QUIZ – Exponential Modeling

Name

Date: Form B

1. Is the function $f(x) = 542\ (0.205)^x$ a growth or decay function? What is the constant percentage rate?

2. Write the exponential function with initial height of 45 in., growing at a rate of 3% per year.

3. The half-life of a radioactive substance is 24 days. There are 8.5 grams present initially. When will there be less than 2 grams remaining?

Grade:

Jean Adams

HOMEWORK QUIZ – Exponential Modeling

Name

Date: Form C

1. Is the function $g(t) = 59\ (1.25)^t$ a growth or decay function? What is the constant percentage rate?

2. Write the exponential function with initial mass of 12 lbs., doubling every four days.

3. The half-life of a radioactive substance is 64 days. There are 3.5 grams present initially. When will there be less than 1 gram remaining?

Grade:

HOMEWORK QUIZ – Exponential Modeling

Name

Date: Form D

1. Is the function $f(x) = 623\ (0.45)^x$ a growth or decay function? What is the constant percentage rate?

2. Write the exponential function with initial height of 42 in., growing at a rate of 4% per year.

3. The half-life of a radioactive substance is 22 days. There are 12.5 grams present initially. When will there be less than 4 grams remaining?

Grade:

Jean Adams