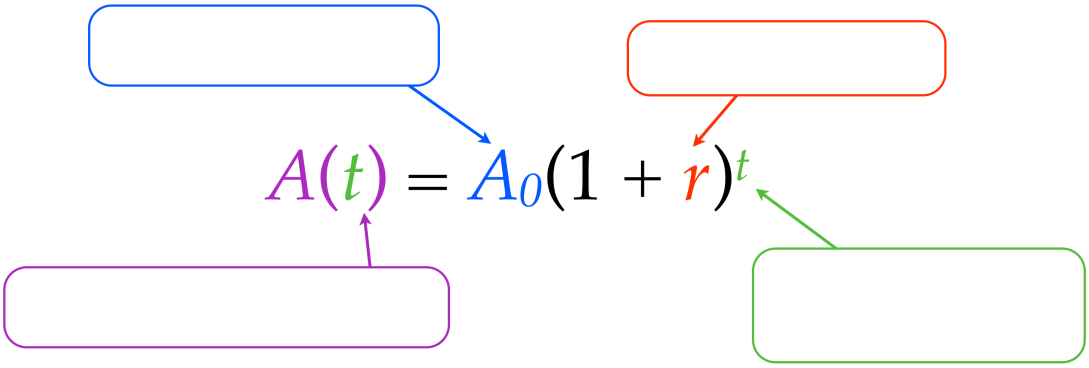
Exponential Growth and Decay

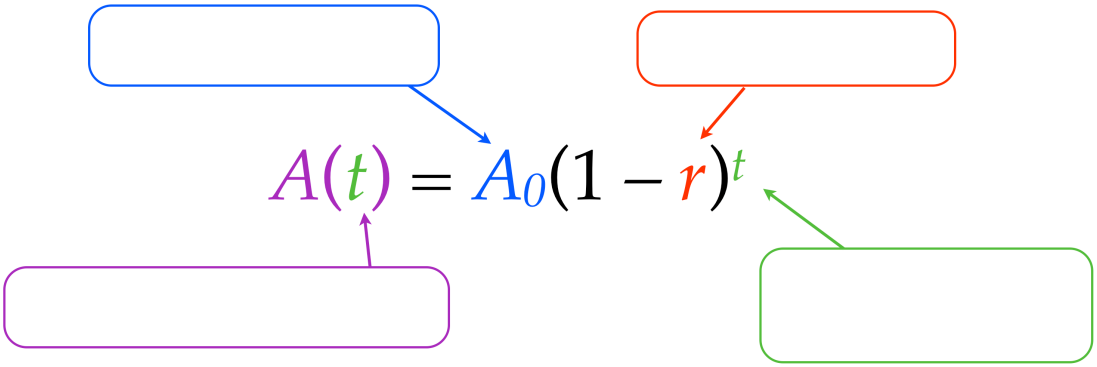
Name _____

Date _____ Period _____

Basic Exponential Growth



Basic Exponential Decay



Growth $A(t) = A_0(1 + r)^t$ $A(t) = A_0(1 - r)^t$ Decay

In 1990, there were 4,500 students at Brooks High School. If the number of students increased by 1.5% each year, how many students were at Brooks High School in...

1997? 2006?

Growth $A(t) = A_0(1 + r)^t$ $A(t) = A_0(1 - r)^t$ Decay

You purchase a new car for $22,000. Each year the value of the car decreases by 13%. What is the value of your car after...

4 years? 6 years ?

Growth $A(t) = A_0(1 + r)^t$ $A(t) = A_0(1 - r)^t$ Decay

The population of a small city grew exponentially from 1986 to 2008. If the population in 1986 was 15,500 and in 2008 the population was 45,300, what was the growth rate for this small town?

Exponential Growth

$$A(t) = A_0(1 + r)^t$$

Exponential Decay

$$A(t) = A_0(1 - r)^t$$