Uninhibited Growth and Decay
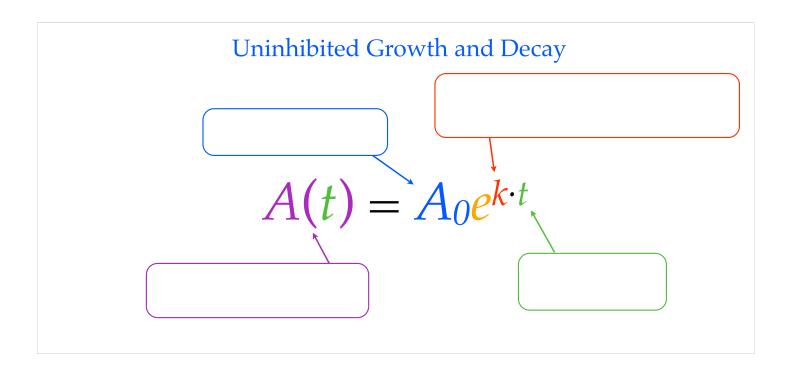
Uninhibited Growth and Decay

$$A(t) = A_0 e^{k \cdot t}$$

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A certain bacteria grows according to the law of uninhibited growth with the function $A(t) = 75 e^{0.05 \cdot t}$, where $A(t)$ is measured in grams and t is measured in days.

What is the growth rate for the bacteria?   What is the initial amount of the bacteria?

$A(t) = A_0 e^{k \cdot t}$ **Uninhibited Growth and Decay**

A certain bacteria grows according to the law of uninhibited growth with the function $A(t) = 75e^{0.05 \cdot t}$, where $A(t)$ is measured in grams and t is measured in days.

How many grams of bacteria are present after 12 days?

How long will it take for the bacteria to reach 405 grams?

$A(t) = A_0 e^{k \cdot t}$ **Uninhibited Growth and Decay**

A certain bacteria grows according to the law of uninhibited growth with the function $A(t) = 75e^{0.05 \cdot t}$, where $A(t)$ is measured in grams and t is measured in days.

How long will it take for the bacteria to double in size?

How long will it take for the bacteria to triple in size?

$A(t) = A_0 e^{k \cdot t}$ Uninhibited Growth and Decay

If the number of cells of a bacteria doubles every 5 hours, find the growth rate of the bacteria.

How long will it take for the bacteria to triple in size?