

# GGG Investigation 4 iXL

Download the iXL app from the app store.

Open the app and click **Sign in**.

Your username is: first initial last name 476 (no spaces)

Your password is: math

Once logged in, change the grade in the upper-right hand corner to **ALGEBRA 1**.

Scroll down to the standard **X. Exponential Functions**.

It is in the left-hand column and has lime green heading.

Select **X.3 Exponential Growth and Decay: Word Problems**

Click **Practice Now**

**This assignment is a FORMATIVE ASSESSMENT.  
Your goal is to earn a Smart Score of 85 or better.**

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**Exponential Growth:**  $y = (\text{y-intercept}) \cdot (\text{growth factor})^x$   
 $y = (\text{starting value}) \cdot (1 + \% \text{ of increase as a decimal})^x$   
 $y = (\text{starting value}) \cdot (1 + \% \text{ of growth})^x$

**Exponential Decay:**  $y = (\text{y-intercept}) \cdot (\text{decay factor})^x$   
 $y = (\text{starting value}) \cdot (\% \text{ remaining as a decimal})^x$   
 $y = (\text{starting value}) \cdot (1 - \% \text{ of decay})^x$

**Half-Life Problems:**  $y = (\text{y-intercept}) \cdot (1/2)^{\text{the \# of half-lives}}$   
 $y = (\text{starting value}) \cdot (0.5)^{\text{the \# of half-lives}}$

**Amount of Interest:**  $y = (\text{starting value}) \cdot (1 + \% \text{ of growth})^x - (\text{starting value})$