

GGG - Inv. 3.2 Notes

$$y = (\text{growth factor}^x) \cdot (\text{y-intercept})$$

Growth Factor:

This is the amount multiplied by each time

Example: The rabbit population in Problem 3.1 increased 1.8 times each year.

Growth Rate:

This is the **percent of increase**

Also called the **percent of change**

Example: The rabbit population in Problem 3.1 increased 80% each year.

$$\text{Growth Rate (or Percent of change)} = \frac{\text{Change in the data}}{\text{Starting value in the data}}$$

Example: % of change in the population = $\frac{\text{Change in the population}}{\text{Starting population}}$

TO CHANGE GROWTH FACTOR TO GROWTH RATE:

Change the growth factor to a % by multiplying by 100. Then subtract 100.

Example:

Growth Factor of 2.5

$$2.5 \times 100 = 250\%. \text{ Then } - 100 = 150\%$$

So the growth rate is 150%

TO CHANGE GROWTH RATE TO GROWTH FACTOR:

Change to a decimal by $\div 100$. Then add 1.

Example:

Growth Rate of 90%

$$90\% = 0.90. \text{ Then add } 1.$$

So the growth factor is 1.9