

TRS 92: Skeeters and Beyond!

1. Another rare life form has been discovered. Data on the Tilipiloes population is given below.

Day	Population (in thousands)
0	2
13	10

a. Use your calculator or the Graph program (found on all FLC lab computers under the Math and Stats folder) and guess and check to find an exponential equation that models the data. **Round to 2 decimals.** Also, clearly define your independent and dependent variables.

b. Using your equation in **part a**, estimate how long it will take for the Tilipiloes population to reach ...

i. 100 thousand

ii. 1000 thousand

c. Fill in the table using your equation in **part a**. **Round to 2 decimals.**

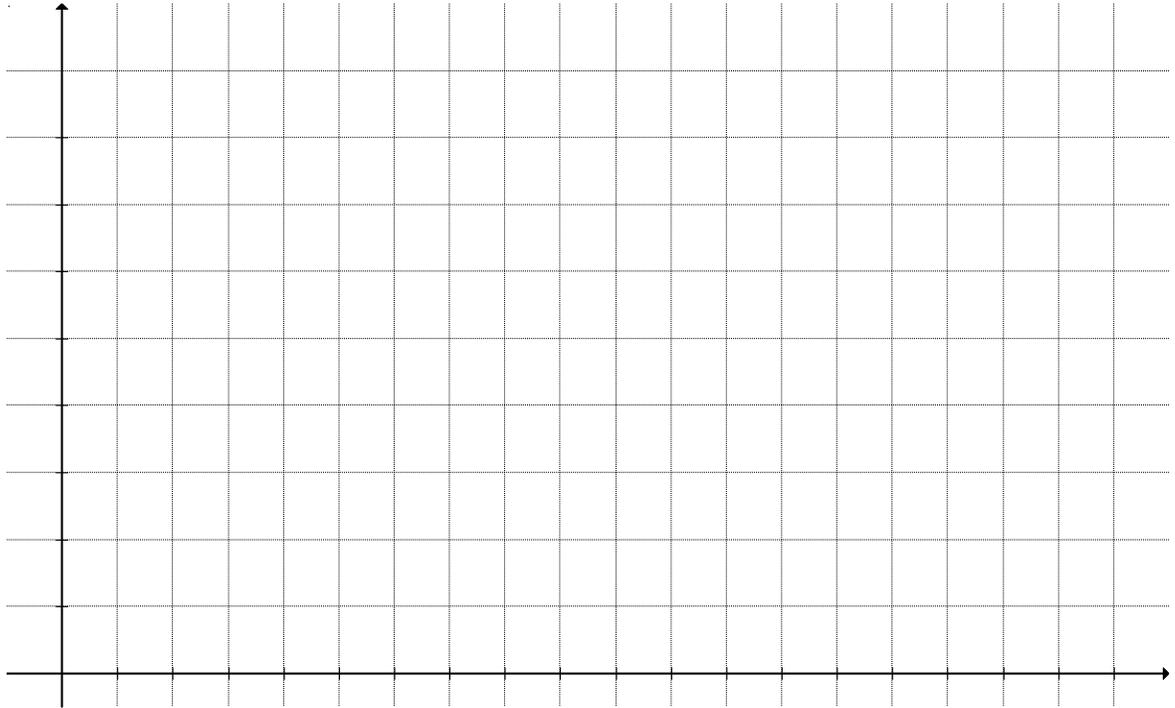
Day	Population (in thousands)
0	2
5	
10	
13	10
20	

d. Researchers have just discovered a mistake! They now believe that the population of Tilipiloes is growing linearly. Use the data given initially to create a linear equation. **Show your work and round to 3 decimals.**

- e. Fill in the table using your linear equation from **part d**. **Round to 2 decimals.**

Day	Population (in thousands)
0	2
5	
10	
13	10
20	

- f. Graph your exponential equation from **part a** AND your linear equation from **part d** on the axes below. Don't forget to label the axes.



2. LaTonya decides to put \$5000 into a retirement account that earns 4% interest on her 25th birthday. This makes her father to think about his retirement so he decides to put \$10,000 into an account that also earns 4% interest on his 45th birthday. Complete the following table based on this information. Use the following variables:

Independent: t = time in years the money is invested

Dependent: L = amount (\$) in LaTonya's Account, F = amount (\$) in Father's account

a.

	Equation (in function notation)	Amount in the account at retirement (age 65)	Total amount earned
LaTonya			
Father			

- b. Compare the amounts each earned and explain what makes the difference.

3. Refer back to your Day 32 Homework Part B #1. Graph the exponential equation on the axes below.

