Exponentials Day 2 HW

1. Norman decides to print five different reduced draft copies of his original design photo. Each one will be reduced to 90% of the previous size.

a. Complete the table below to show the dimensions of the first five draft versions. Include all decimal places.

Number of Reductions	Width (cm)	Length (cm)
0	4	6
1		
2		
3		
4		

b. Write the exponential function that expresses the width w of a reduction in terms of n, the number of reductions performed.

c. Write the exponential function that expresses the length l of a reduction in terms of n, the number of reductions performed.

d. Use the functions to find the dimensions (length x width) of the design if the original design undergoes ten reductions.

2. Wally's Warehouse was founded in 2001. In 2004, there were 216 employees that worked there. In 2005, there were 324 employees that worked there.

   a. If the number of employees is increasing <u>exponentially</u>, how many employees will there be in 2006?

   b. How many employees were there at the start in 2001?

   c. Write an exponential equation that models the number of employees over the years.

3. For the equation $y = 2000(1.05)^x$, identify the value of the parameters a and b. Then explain their meaning in terms of a savings account in a bank.