

# Functions Day 3: Homework

## Exponential Growth and Decay

1. Let  $y = 10(1.2)^x$ . Fill in the following x and y table.

x	y	a. Growth/decay factor: b. Growth/decay rate: c. Circle: Growth / Decay
0		
1		
2		
3		

2. Let  $y = 6(0.2)^x$ . Fill in the following x and y table.

x	y	a. Growth/decay factor: b. Growth/decay rate: c. Circle: Growth / Decay
0		
1		
2		
3		

3. Let  $y = 28(7)^x$ . Fill in the following x and y table.

x	y	a. Growth/decay factor: b. Growth/decay rate: c. Circle: Growth / Decay
-2		
-1		
0		
1		
2		

# Functions Day 3: Homework

## Exponential Growth and Decay

4. Complete the following table for each unknown function a - f.

	a.	b.	c.	d.	e.	f.
<b>Factor</b>	1.5		0.8		3.6	
<b>Rate</b>		0.95		-0.5%		-0.25
<b>Growth or Decay</b>						

5. Fill out the right column of each table.

Bacteria X

Time	Amount of bacteria	
4 am	2	a. Circle: Exponential / Linear / Other (If exponential, do b-d) b. Circle: Growing / Decaying c. Exponential Growth Factor: d. Exponential Growth Rate:
5 am	4	
7 am	16	
9 am	64	
10 am	128	

Bacteria Y

Time	Amount of bacteria	
Noon	80.8	a. Circle: Exponential / Linear / Other (If exponential, do b-d) b. Circle: Growing / Decaying c. Exponential Growth Factor: d. Exponential Growth Rate:
1 pm	83.1	
2 pm	85.4	
3 pm	87.7	
4 pm	90.0	

Bacteria Z

Time	Amount of bacteria	
10 am	3.8 million	a. Circle: Exponential / Linear / Other (If exponential, do b-d) b. Circle: Growing / Decaying c. Exponential Growth Factor: d. Exponential Growth Rate:
2 pm	2.47 million	
6 pm	1.6055 million	
10 pm	1.043575 million	
--	--	