NAME:_____ PER:_____

EXPONENTIAL FUNCTION PRACTICE

PART I: Describe the basic parts of the following exponential functions (A, B, GROWTH/DECAY)

1. $y = 2(3)^x$ **2.** $y = (\frac{5}{2})^x$ **3.** $y = \frac{1}{2}(3)^x$

PART II: Complete the table, find your ratio and state growth/decay

4. $y = 8(0.5)^x$

a = ____, *b* = ____

x	y	Ratio
0		
1		
2		
3		
4		

5. $y = 100(0.5)^x$

a = ____, *b* = ____

x	y	Ratio
0		
1		
2		
3		
4		

6. $y = 200(0.8)^x$

a = ____, *b* = ____

x	y	Ratio
0		
1		
2		
3		
4		

PART III: Find your equation, find a/b, and find your ratio

7. $y =$ ____(____)^x

x	y	Ratio
0	5	
1	20	
2	80	
3	320	
4	1280	

a = ____, *b* = ____

8. $y =$ ____(____)^x

x	y	Ratio
0	2	
1	18	
2	162	
3	1458	
4	13,122	

a = ____, *b* = ____

9. $y =$ ____(____)^x

x	y	Ratio
0	16	
1	24	
2	36	
3	54	
4	81	

a = ____, *b* = ____

10. $y =$ ____(____)^x

x	y	Ratio
0	500	
1	200	
2	80	
3	32	
4	12.8	

a = ____, *b* = ____

PART IV: Find the equation. Find the y value for the given x value.

11.

x	y
0	4
1	2
2	1
3	0.5

f(x)=

What is the value of y when x=8?

12.

days	bacteria
0	15
1	45
2	135
3	405

f(x)=

What is the number of bacteria after 10 days?

13.

x	f(x)
0	4
1	12
2	36
3	108

f(x)=

What is f(x) when x=7?

14.

x	y
0	729
1	243
2	81
3	37

f(x)=

What is the value of y when x=16?

15.

x	y
0	1280
1	960
2	720
3	540

f(x)=

What is the value of y when x=8?