Exponential Functions – Day 2
Assignment

Name _____
Date _____ Period _____

1. For the equation $y = \left(\frac{1}{2}\right)^x$

   a. Generate a table

x	y
0	
1	
2	
3	
4	

   b. How does the value of y change as x increases?

   c. Find the value of y when x = 8.

2. For the equation $y = (2)^x$

   a. Generate a table

x	y
0	
1	
2	
3	
4	

   b. How does the value of y change as x increases?

   c. Find the value of y when x = 20.

3. How are tables of exponential growth and exponential decay relationships different?

4. How are the graphs of exponential growth and exponential decay functions different?

5. In the equation $y = 24\left(\frac{1}{2}\right)^x$

   a. What is the decay factor?

   b. What is the initial amount?

6. Use the table below

x	y
1	20
2	15
3	10
4	5
5	0

   a. Is the equation exponential or linear?

   b. How can you tell?

   c. Write an equation that represents the table.

Exponential Functions – Day 2
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Name _____
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7. Use the table below

x	y
1	625
2	125
3	25
4	5
5	1

a. Does the relationship indicate an exponential growth, exponential decay, or linear relationship?

b. How can you tell?

c. Write an equation that represents the table.

8. Use the table below

x	y
0	81
1	27
2	9
3	3
4	1

a. What is the initial amount?

b. What is the decay factor?

c. What is the exponent?

d. Write an equation that represents the table.

9. Use the table below

x	y
1	256
2	64
3	16
4	4
5	1

a. What is the initial amount?

b. What is the decay factor?

c. What is the exponent?

d. Write an equation that represents the table.

10. Use the table below

x	y
1	1296
2	216
3	36
4	6
5	1

a. What is the initial amount?

b. What is the decay factor?

c. What is the exponent?

d. Write an equation that represents the table.