**Review Day 2 Worksheet** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Exponential Patterns Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_

Fill in the following tables and then describe the rate of change

1.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Term | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Rate of change  |
| Value | 1 | 4 | 8 | 16 |  |  |  |  |

2.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Term | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Rate of change  |
| Value | 3 | 9 | 27 | 81 |  |  |  |  |

3. For the tables above, write a rule that describes the behavior

 Table 1:

 Table 2:

4. Graph each of the rules (hint: graph the first 3 terms including 0)

 Table 1 Table 2

5. Given the following pattern of numbers describe the rate of change

 4096, 1024, 256, 64,……

6. Write a rule that describes the behavior (hint: remember the rate of change is a common factor)

7. Using  fill in the following table of values

|  |  |
| --- | --- |
| x | y |
| 0 |  |
| 1 |  |
| 2 |  |

8. Graph the information from your table

|  |  |
| --- | --- |
| x | y |
| 1 | 2 |
| 2 | 4 |
| 3 | 6 |
| 4 | 8 |

9. Are the following representations exponential? If so, what’s the rate of change?

|  |  |
| --- | --- |
| x | y |
| 1 | 1 |
| 2 | 4 |
| 3 | 16 |
| 4 | 64 |

10. State whether the following equations are growth or decay

|  |  |
| --- | --- |
| x | y |
| 1 | 2 |
| 2 | 6 |
| 3 | 18 |
| 4 | 54 |

a)  b)  c) 