

Exponentials Quiz 1 Review Worksheet

1. Be able to identify an exponential function from a table.
2. Be able to write equations for linear and exponential functions from a table.
3. Be able to graph exponential functions and give the domain, range, and asymptote.
4. Be able to calculate the average rate of change.

Tell whether the ordered pairs satisfy an exponential function. Explain your answer.

1.

| x | y |
|----|-----|
| -4 | 1.5 |
| -3 | 3 |
| -2 | 6 |
| -1 | 12 |

2.

| x | y |
|---|----|
| 1 | 1 |
| 2 | 2 |
| 3 | 6 |
| 4 | 24 |

3.

| x | y |
|----|------|
| -2 | -2 |
| -1 | -10 |
| 0 | -50 |
| 1 | -250 |

4. $\{(1,10), (2, 20), (3, 40), (4, 80)\}$ _____

5. $\{(1,5), (2, 10), (3, 15), (4, 20)\}$ _____

For 6-11,

1. Is it Linear or Exponential?

2. Write the Equation for the Table

6.

| x | y |
|----|----|
| -4 | 16 |
| -3 | 20 |
| -2 | 24 |
| -1 | 28 |

7.

| x | y |
|----|---------------|
| -2 | $\frac{2}{3}$ |
| -1 | 2 |
| 0 | 6 |
| 1 | 18 |

8.

| x | y |
|----|----------------|
| -2 | 100 |
| -1 | 10 |
| 0 | 1 |
| 1 | $\frac{1}{10}$ |

9.

| x | y |
|----|----|
| -2 | 9 |
| -1 | 18 |
| 0 | 27 |
| 1 | 36 |

10.

| x | y |
|---|--------|
| 0 | 2 |
| 1 | 11 |
| 2 | 60.5 |
| 3 | 332.75 |

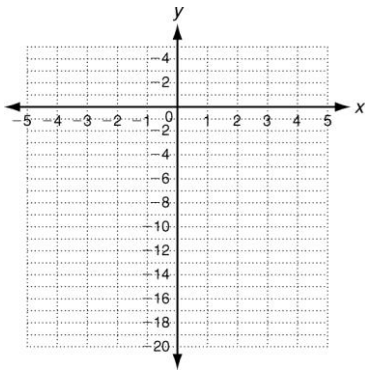
11.

| x | y |
|---|----|
| 2 | 6 |
| 3 | 10 |
| 4 | 14 |
| 5 | 18 |

Graph the Following Functions.

12. $y = -4(2)^x$

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



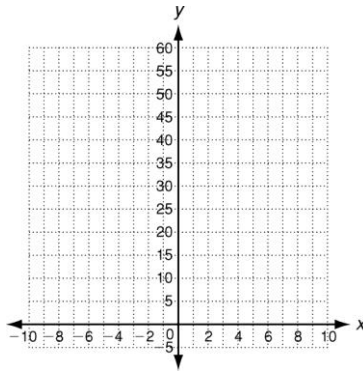
Domain:

Range:

Asymptote:

13. $y = 2(5)^x$

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



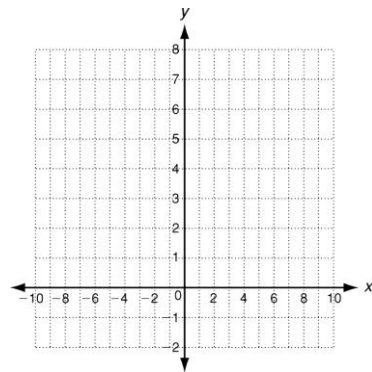
Domain:

Range:

Asymptote:

14. $y = 4\left(\frac{1}{2}\right)^x$ *Doesn't follow our normal pattern*

| x | y |
|----|------|
| -2 | -2.5 |
| -1 | -2 |
| 0 | -1 |
| 1 | 1 |
| 2 | |



$y = -3$

Domain:

Range:

Asymptote:

all real #s
 $y > -3$
 $y = -3$

| Equation | Table | Graph | | | | | | | | | | | | |
|---|--|-------|------|---|---|---|----|---|----|---|----|---|----|--|
| $f(x) = 4(2)^x$ Find the average rate of change on the interval $-1 \leq x \leq 1$ | <table border="1" style="margin: auto;"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>5</td> </tr> <tr> <td>1</td> <td>10</td> </tr> <tr> <td>2</td> <td>20</td> </tr> <tr> <td>3</td> <td>40</td> </tr> <tr> <td>4</td> <td>80</td> </tr> </tbody> </table> Find the average rate of change on the interval $0 \leq x \leq 2$ | x | f(x) | 0 | 5 | 1 | 10 | 2 | 20 | 3 | 40 | 4 | 80 | Find the average rate of change on the interval $-1 \leq x \leq 1$ |
| x | f(x) | | | | | | | | | | | | | |
| 0 | 5 | | | | | | | | | | | | | |
| 1 | 10 | | | | | | | | | | | | | |
| 2 | 20 | | | | | | | | | | | | | |
| 3 | 40 | | | | | | | | | | | | | |
| 4 | 80 | | | | | | | | | | | | | |
| Find the average rate of change on the interval $2 \leq x \leq 4$ | | | | | | | | | | | | | | |

Name _____