

3.1/3.4 Re-Teach Worksheet

Name _____

Intermediate Algebra

- 3.1** I can demonstrate understanding about exponential functions and compare situations and equations for exponential functions to those for linear functions.
- 3.4** I can demonstrate understanding of the significant features of a graph of an exponential function and their relationship to real-world situations.

For each of the following problems identify the type of change as linear or exponential.
Explain your reasoning.

1)

x	y
1	64
2	16
3	4
4	1
5	0.25

Circle One:
Linear / Exponential

Reasoning:

2)

x	y
-2	16
-1	19
0	22
1	25
2	28

Circle One:
Linear / Exponential

Reasoning:

3) $y = -\frac{5}{7}x - 4$

Circle One: Linear / Exponential

Reasoning:

4) $y = \left(\frac{1}{3}\right)^x - 8$

Circle One: Linear / Exponential

Reasoning:

5) $f(x) = 7(6)^x + 2$

Circle One: Linear/Exponential

Reasoning:

6) Each term in a sequence is exactly five greater than the previous term.

Circle One: Linear / Exponential

Reasoning:

7) Your brand new car loses 15% of its value each year.

Circle One: Linear / Exponential

Reasoning:

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Given the following tables, create one linear and one exponential function. Justify your reasoning.

8) Linear Function:

x	y
-1	8
0	
1	
2	20

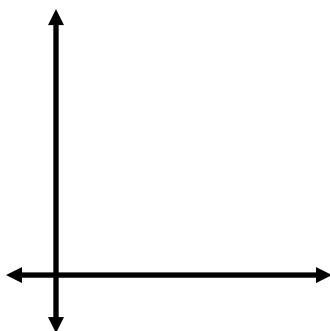
Explain:

9) Exponential Function:

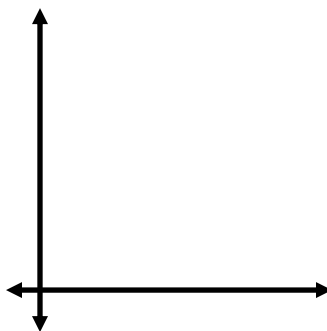
x	y
4	3
6	
8	
10	24

Explain:

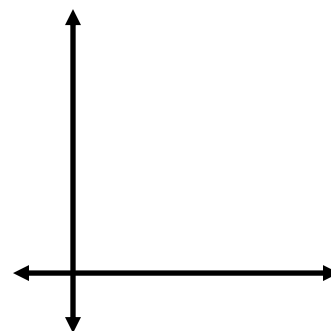
10) Draw a function that is linear.



11) Draw a function that shows exponential growth.



12) Draw a function that shows exponential decay.

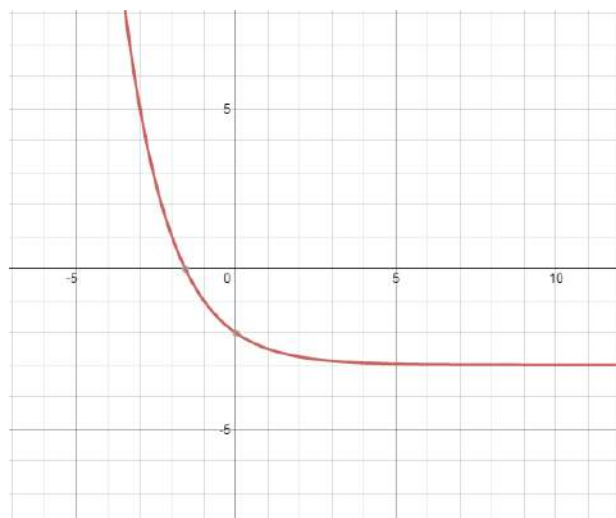


13. To the right is the graph of the function $f(x) = 5^x - 3$. Draw and label the asymptote on the graph and identify the domain and range.

Domain: _____

Range: _____

Asymptote: _____



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