Advanced Algebra ¾ Name:_____

Multiple Representations of Exponential Functions

Exponential functions can be represented in many ways: as equations, as tables, as graphs, or as word problems. Each representation describes the same pattern. Practice converting between the multiple representations of each exponential function.

Given a Table, Create an Equation and Word Problem to match.

1.

x	0	1	2	3
y	10	20	40	80

a. Write the equation

b. Write a word problem

2.

x	2	3	4	5
y	9	27	81	243

a. How did you find the initial value?

b. Write the equation

c. Write a word problem

3.

x	3	6	9	12
y	200	100	50	25

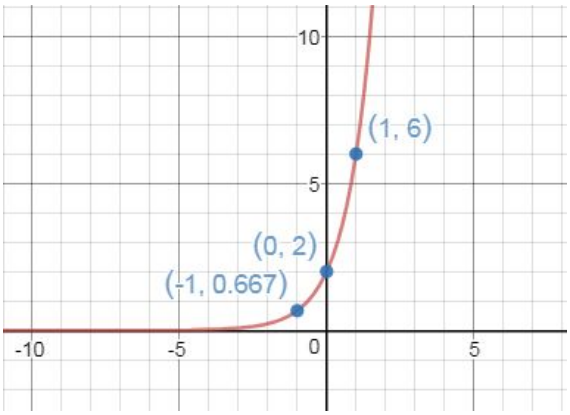
a. How did you find the growth rate?

b. Write the equation

c. Write a word problem

Given a Graph, find the Equation

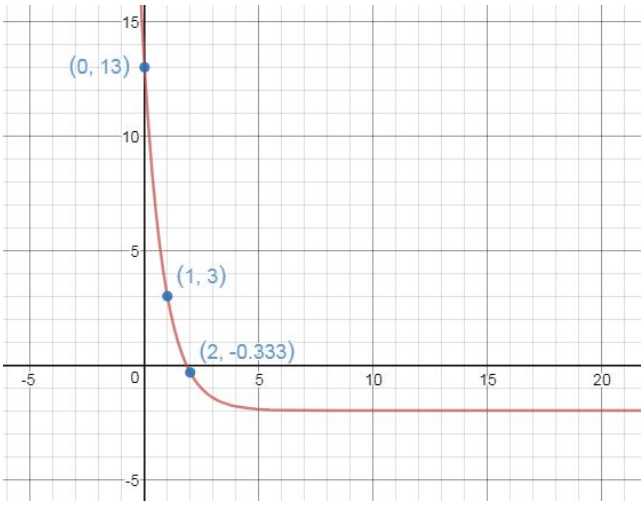
1.



a. Equation:

b. This graph was translated vertically by 5 to create t(x). Write the transformed function, t(x).

2.

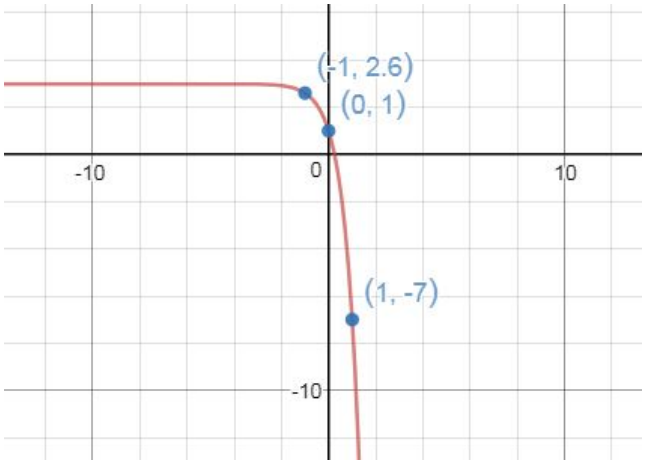


a. Equation:

b. How did the horizontal asymptote show up in your equation?

c. This graph was reflected over the x - axis, then shifted left 4 units to create s(x). Write the transformed function, s(x).

3.



a. Equation:

b. What part of the equation makes the graph point down?

c. This graph was reflected over the y - axis, then shifted up 2 units to create r(x). Write the transformed function, r(x).