Name_____ Date_____ Per_____

Exponential Functions Assignment

Graph the following exponential functions in the same coordinate plane with a different color for each function. Make a conclusion for each part, describe what happens to the asymptotes, and find domain and range for each. (Do not draw in your asymptotes, but be aware of where they belong. Then name the domain and range for each function.

1.) $y = 2^x$ 2.) $y = 3^x$ 4.) $y = 4^x$

What do you conclude?

_____

_____

_____

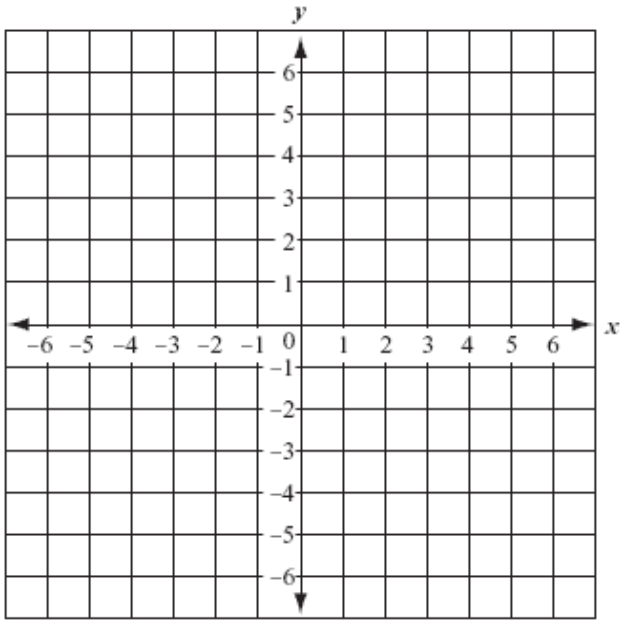
_____

_____

_____

_____

Domain: _____ Range: _____



5.) $y = \left(\frac{1}{2}\right)^x$ 6.) $y = \left(\frac{1}{4}\right)^x$ 7.) $y = 3^{-x}$

What do you conclude?

_____

_____

_____

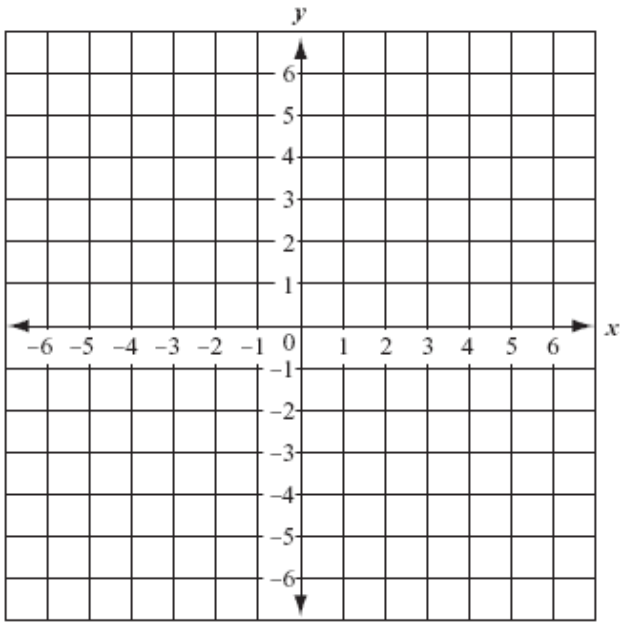
_____

_____

_____

_____

Domain: _____ Range: _____



Name_____ Date_____ Per_____

Exponential Functions Assignment

8.) $y = -2^x$

9.) $y = -\left(\frac{1}{2}\right)^x$

10.) $y = (4)^{-x}$

What do you conclude?

_____

_____

_____

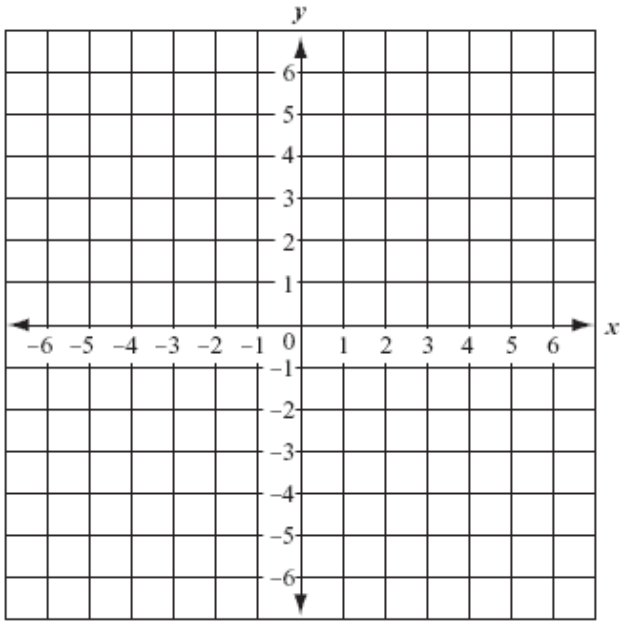
_____

_____

_____

_____

Domain: _____ Range: _____



11.) $y = (2^{x-5})$

12.) $y = (2^{x+3})$

13.) $y = (2^{x-1})$

What do you conclude?

_____

_____

_____

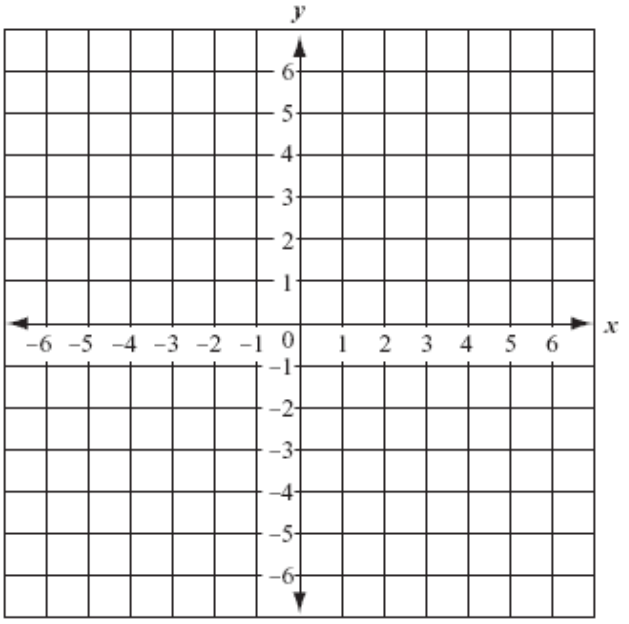
_____

_____

_____

_____

Domain: _____ Range: _____



Name_____ Date_____ Per_____

Exponential Functions Assignment

14.) $y = 2^x + 3$

15.) $y = 3^x - 4$

16.) $y = 4^x + 2$

What do you conclude?

_____

_____

_____

_____

_____

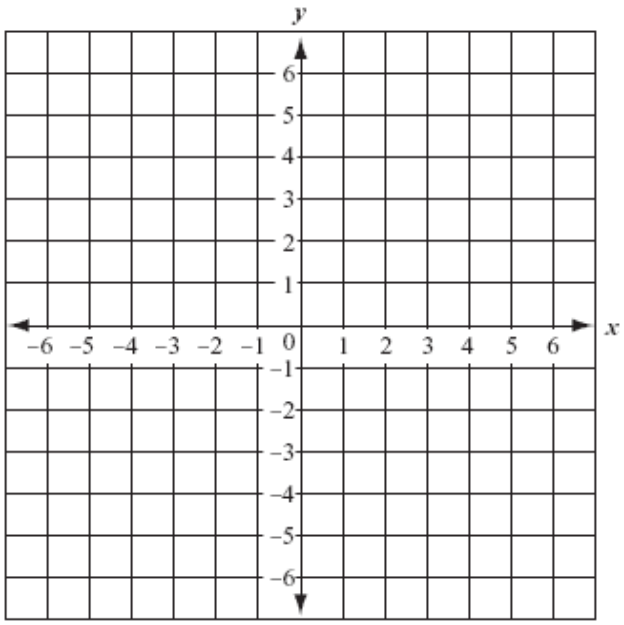
_____

_____

What happens to the range?

_____

_____



17.) $y = \frac{1}{2}(2)^x$

18.) $y = 4\left(\frac{1}{4}\right)^x$

19.) $y = 2(3)^x$

What do you conclude?

_____

_____

_____

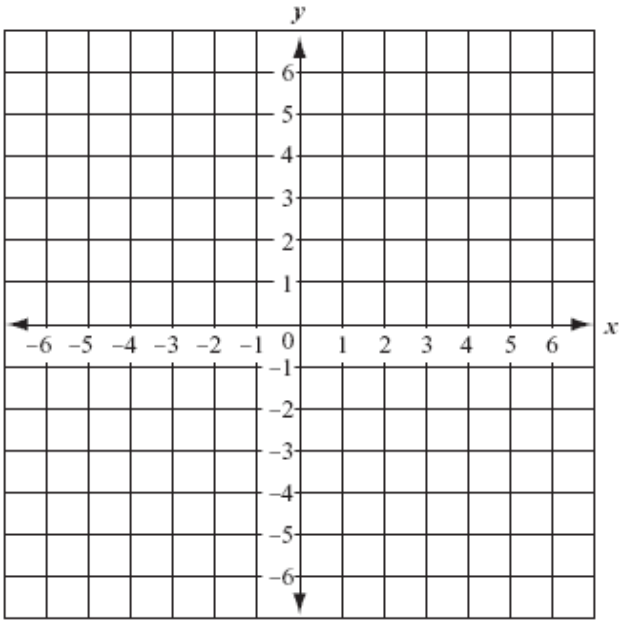
_____

_____

_____

_____

Domain: _____ Range: _____



Name_____ Date_____ Per_____

Exponential Functions Assignment

$$y = -2\left(2^{x+3}\right) + 5$$

Parent Function:

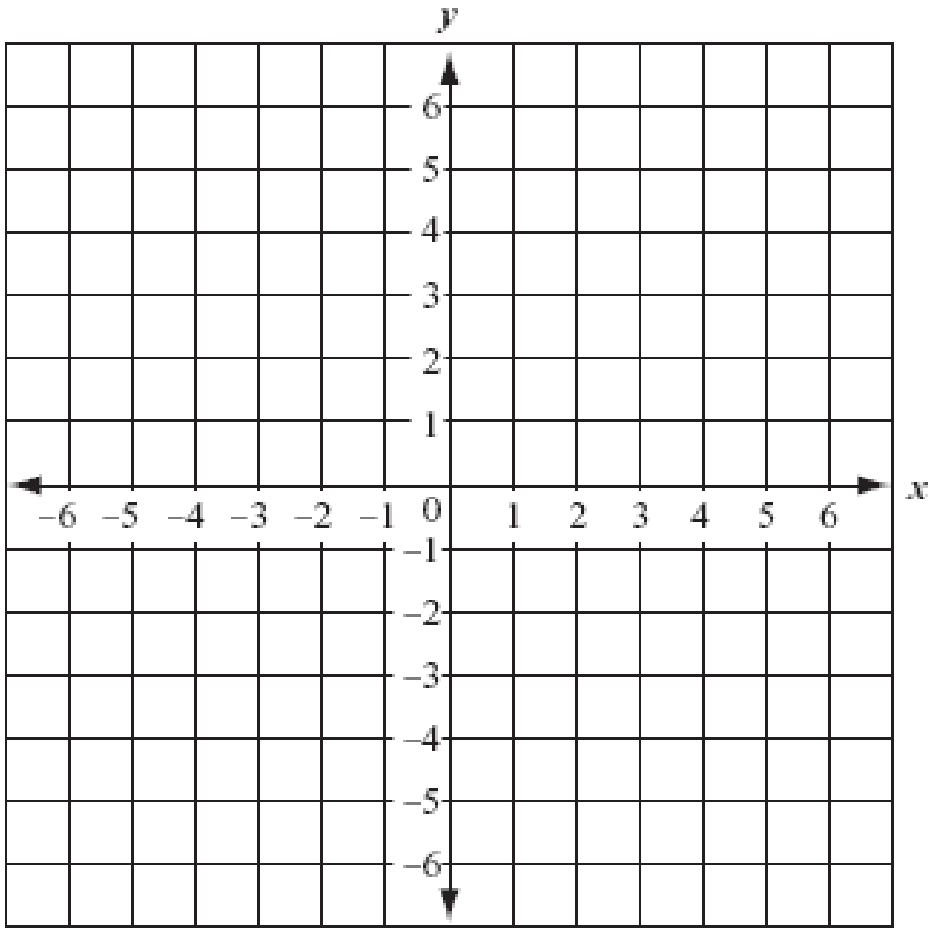
_____

Helper Points:

_____

_____

Show work, if needed:



Transformations:

_____

_____

_____

_____

Domain:

_____

Range:

_____

Asymptote:

_____