

Day 2: Transforming Exponential Functions Practice (h & k)

Name: _____

Practice Assignment

Directions: Describe the transformations from the given function to the transformed function. Then name the y-intercept and asymptote.

1. $f(x) = 2^x \rightarrow f(x) = 2^{x-2}$

Transformations:

Y-intercept:

Asymptote:

2. $y = \frac{1}{2}(8)^x \rightarrow y = \frac{1}{2}(8)^x + 6$

Transformations:

Y-intercept:

Asymptote:

3. $y = 4(0.6)^x \rightarrow y = 4(0.6)^x - 3$

Transformations:

Y-intercept:

Asymptote:

4. $f(x) = 4^x \rightarrow f(x) = 4^{x+3} - 8$

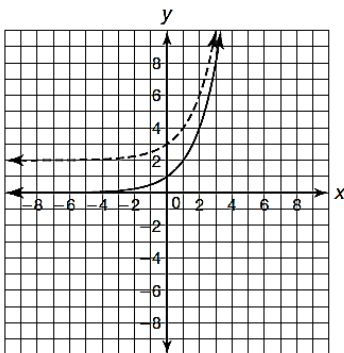
Transformations:

Y-intercept:

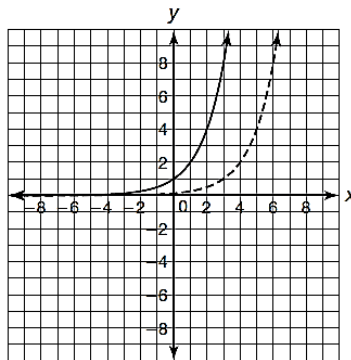
Asymptote:

Directions: Using the graphs of $f(x)$ and $g(x)$, describe the transformations from $f(x)$ to $g(x)$. $f(x)$ is the solid line and $g(x)$ is the dotted line.

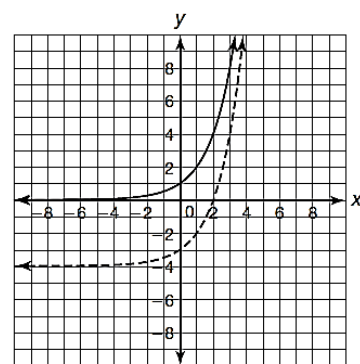
5.



6.



7.



Directions: Using the function $g(x) = 4^x$, create a new function $h(x)$ given the following transformations:

8. down 3 units

9. right 8 units

10. up 4 units and left 2 units

11. left 5 units

12. up 2 units

13. down 1 unit and right 4 units