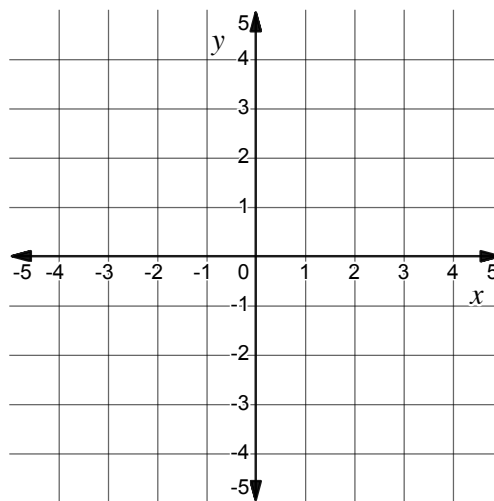


APPC Lesson 4.5 Homework

Name _____

1. Find the x - and y -intercepts, or state that there are none, of $y = 2 \cdot 5^x$.
Write intercepts as ordered pairs.

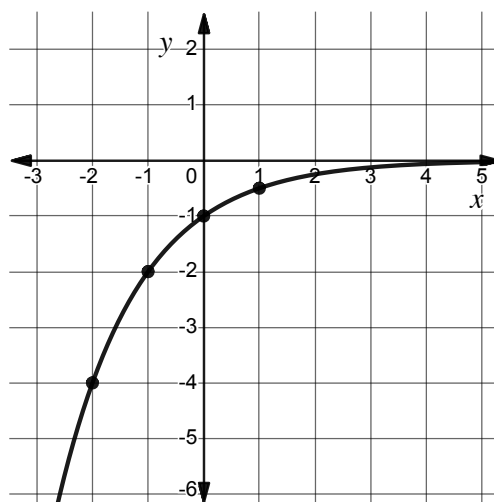
2. Graph $y = 3^{x-2}$ on the coordinate plane given.
Indicate at least two ordered pairs.



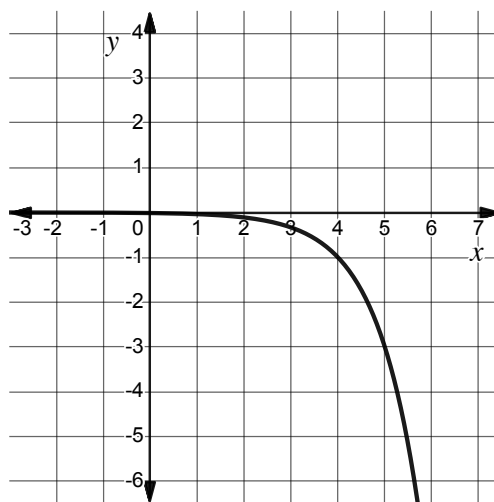
3. Describe the transformations that occurred to the graph of the function $y = 4^x$ to produce the graph of $y = -4^{x+1} - 5$.

4. Let $g(x) = 2 \cdot 6^x + 7$.
- Identify the y -intercept of the graph of $y = g(x)$.
 - Evaluate $\lim_{x \rightarrow -\infty} g(x)$ and explain what this reveals about the graph of g .
 - What is the domain of g ?
 - What is the range of g ?
 - Is the graph of g concave up or concave down? How do you know?

5. The graph shown has the equation $y = ab^x$ for some constants a and b . Find the values of a and b .



6. Identify the transformations that took place from the parent function $y = 3^x$ to produce the graph of the function shown.



7. Consider the functions $f(x) = \frac{1}{5} \cdot 5^x$ and $g(x) = 5^{x-1}$.

a. Complete the table of values for f and g .

x	-2	-1	0	1	2	3
$f(x)$						

x	-2	-1	0	1	2	3
$g(x)$						

b. What do you notice about the two functions? Why do you think this is?

8. Explain why the graphs of $y = 7^{-x}$ and $y = \left(\frac{1}{7}\right)^x$ are identical.



9. Write the equation of an exponential function, f , that passes through the points $(0, 7)$ and $(1, 22)$ where $\lim_{x \rightarrow -\infty} f(x) = 4$.