

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Learning Goal 7.1**

Applying one or more transformations to an exponential function, including translations, stretches and reflections.

**More Questions**1. Draw the graph of  $y = 3 \times 2^x$ .

- a. How does the graph of  $y = 3 \times 2^x$  compare to the graph of  $y = 2^x$ ?

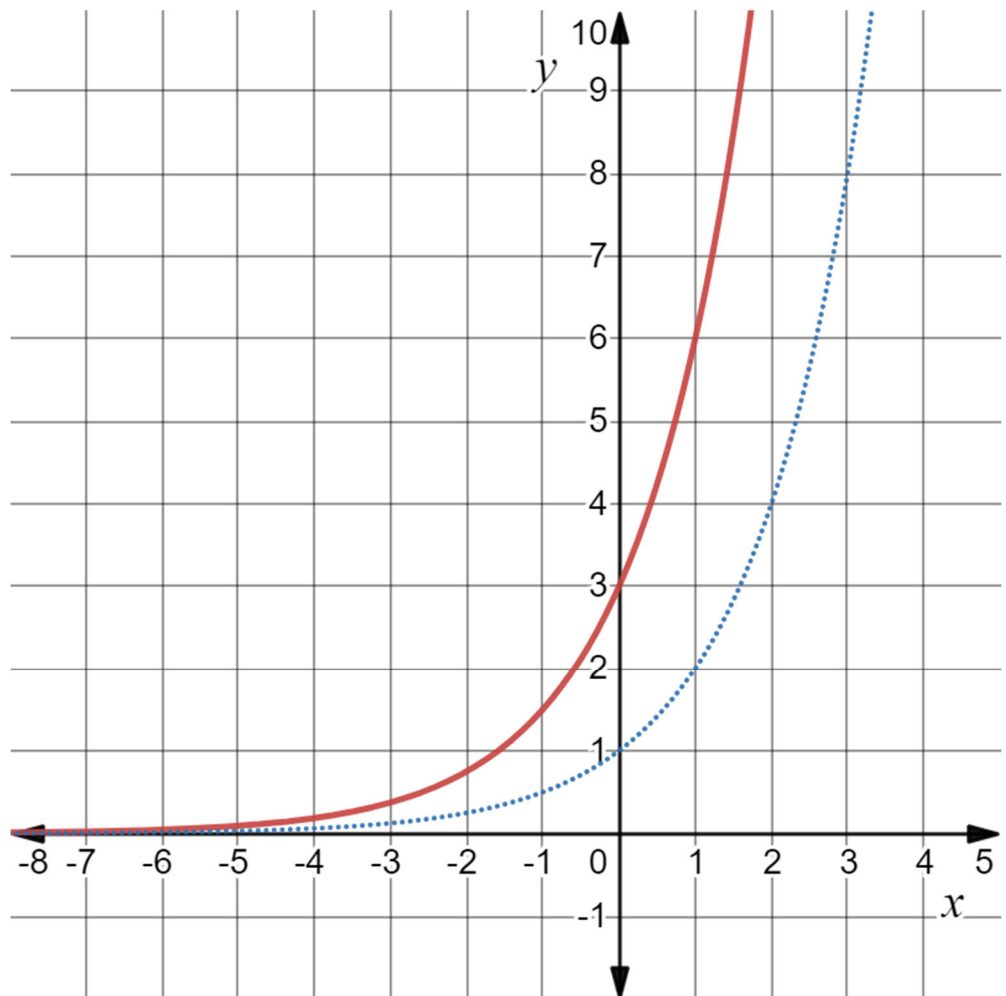
It grows at a faster rate.

- b. What is the  $y$  – intercept of the transformed graph?

$$y = 3$$

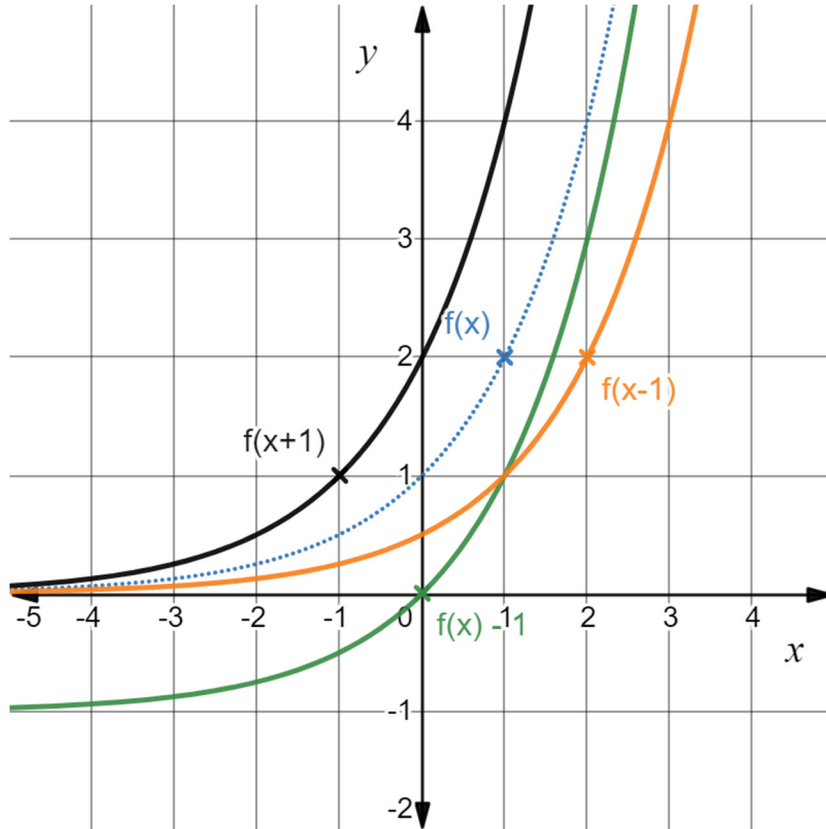
- c. What is the asymptote of the transformed graph?

$$y = 0$$



2. Graph the function  $f(x) = 2^x$ . On the same grid, sketch the graph of each function.

- a.  $y = f(x) - 1$
- b.  $y = f(x - 1)$
- c.  $y = f(x + 1)$



- d.  $y = f(0.5x)$
- e.  $y = f(2x)$
- f.  $y = f(-x)$

