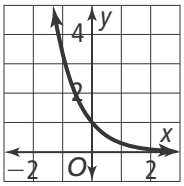
# 6-1 Additional Practice

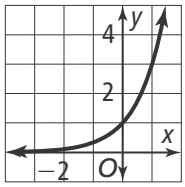
## Key Features of Exponential Functions

**Graph each function. What are the key features of each graph (include domain, range, intercepts, asymptotes, and end behavior)?**

**1.** $y = (0.3)^x$

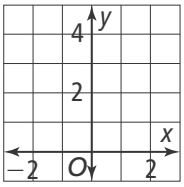



**2.** $y = 3^x$

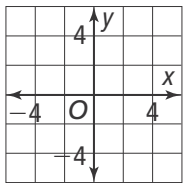



**Graph each function. Describe the graph in terms of transformations of the parent function $f(x) = 2^x$. How do the asymptote and $y$-intercept of the given function compare to the asymptote and intercept of the parent function?**

**3.** $g(x) = (0.5)^x$




**4.** $g(x) = -2^x$




**Without graphing, determine whether the function represents exponential growth or exponential decay. What is the $y$-intercept?**

**5.** $y = 0.99\left(\frac{1}{3}\right)^x$

**6.** $y = 20(1.75)^x$

**Write an exponential function to model each situation. Find each amount after the specified time.**

**7.** A population of 1,236,000 grows 1.3% per year for 10 years.

**8.** A population of 752,000 decreases 1.4% per year for 18 years.