Name

enVision Algebra 2
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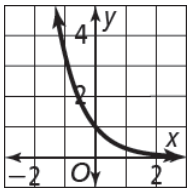
6-1 Additional Practice

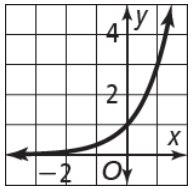
Key Features of Exponential Functions

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

1. $y = (0.3)^x$

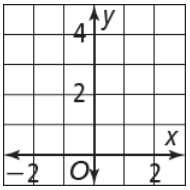


2. $y = 3^x$

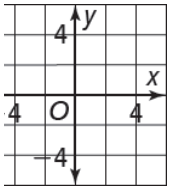


Graph each function. Describe the graph in terms of transformations of the parent function $f(x) = 2^x$. How do the asymptote and y-intercept of the given function compare to the asymptote and intercept of the parent function?

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.