Name _____ Date _____

Practice B

For use with the lesson "Write and Graph Exponential Growth Functions"

Write a rule for the function.

1.

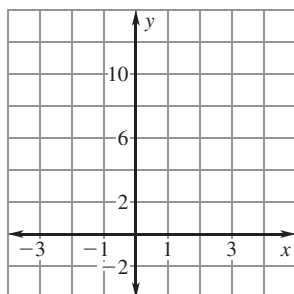| x	−2	−1	0	1	2
y	$\frac{1}{121}$	$\frac{1}{11}$	1	11	121

2.

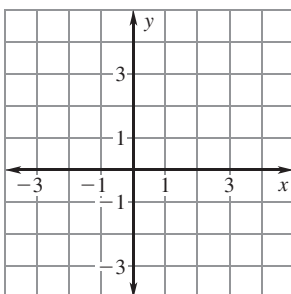| x	−1	0	1	2	3
y	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{1}{2}$	1	2

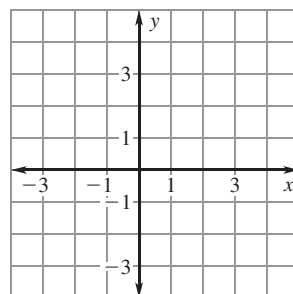## Graph the function and identify its domain and range.
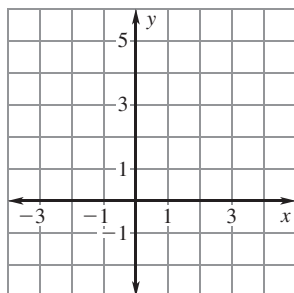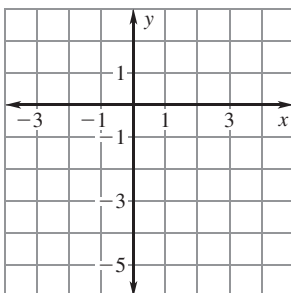
3. $y = 12^x$

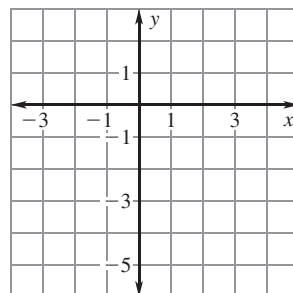**4.** $y = (1.75)^x$

5. $y = (3.1)^x$
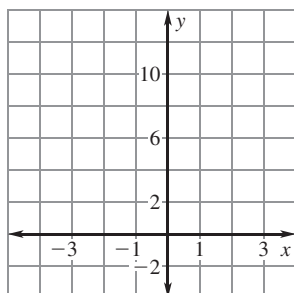
6. $y = \left(\frac{9}{2}\right)^x$
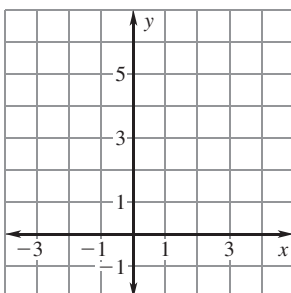
7. $y = -5^x$

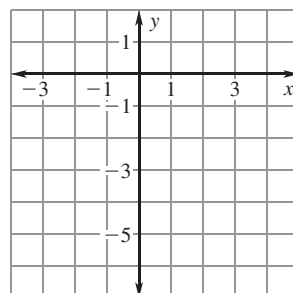**8.** $y = -\left(\frac{3}{2}\right)^x$

9. $y = 5 \cdot 2^x$

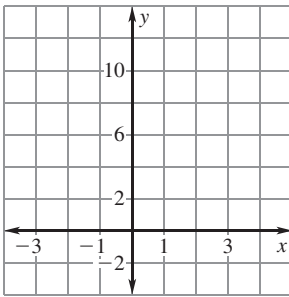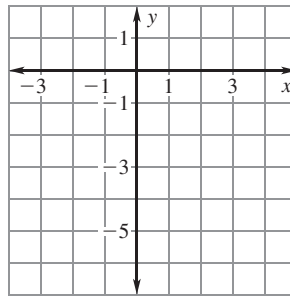**10.** $y = 2 \cdot \left(\frac{4}{3}\right)^x$

11. $y = -3 \cdot 2^x$

LESSON
7.4

Practice B *continued*

For use with the lesson "Write and Graph Exponential Growth Functions"

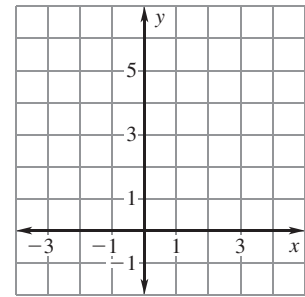**Graph the function. Compare the graph with the graph of $y = 6^x$.**
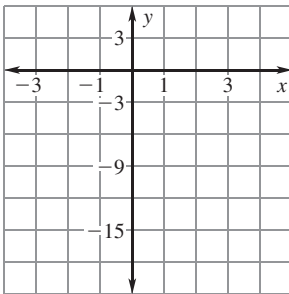
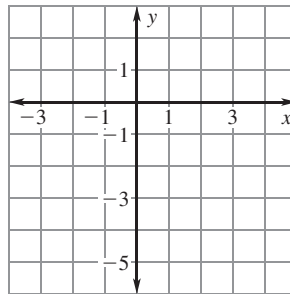**12.** $y = 2 \cdot 6^x$

13. $y = -6^x$
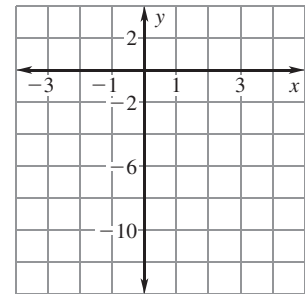
14. $y = \frac{1}{2} \cdot 6^x$

15. $y = -3 \cdot 6^x$

16. $y = -\frac{1}{4} \cdot 6^x$

17. $y = -\frac{3}{2} \cdot 6^x$

18. Investments You deposit $500 in a savings account that earns 2.5% interest compounded yearly. Find the balance in the account after the given amounts of time.

   a. 1 year

   b. 5 years

   c. 20 years

19. College Tuition From 1995 to 2005, the tuition at a college increased by about 7% per year. Use the graph to write an exponential growth function that models the tuition over time.
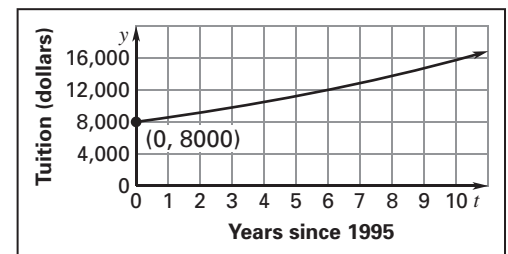
20. Profit A business had $10,000 profit in 2000. Then the profit increased by 8% each year for the next 10 years.

   a. Write a function that models the profit in dollars over time.

   b. Use the function to predict the profit in 2009.