

LESSON
8.6
Practice B
For use with pages 530–538

Tell whether the table represents an exponential function. If so, write a rule for the function.

1.

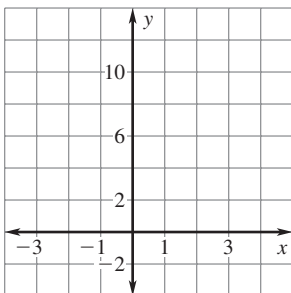
x	-2	-1	0	1	2
y	25	5	1	$\frac{1}{5}$	$\frac{1}{25}$

2.

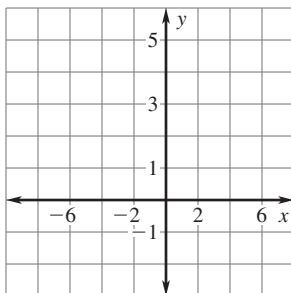
x	-1	0	1	2	3
y	1	4	7	10	13

Graph the function and identify its domain and range.

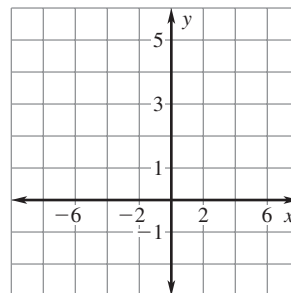
3. $y = \left(\frac{1}{12}\right)^x$



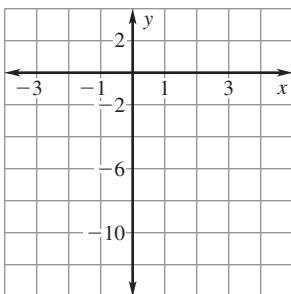
4. $y = \left(\frac{7}{8}\right)^x$



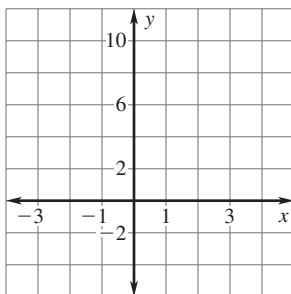
5. $y = \left(\frac{8}{9}\right)^x$



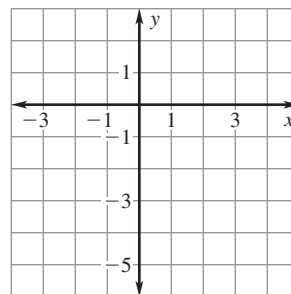
6. $y = -\left(\frac{1}{8}\right)^x$



7. $y = 2 \cdot \left(\frac{1}{5}\right)^x$

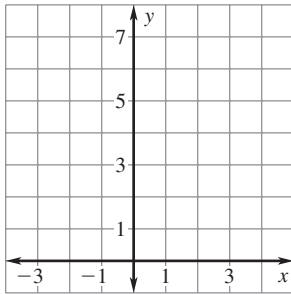


8. $y = -2 \cdot \left(\frac{2}{3}\right)^x$

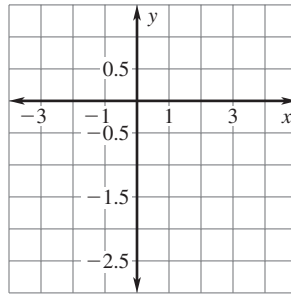


LESSON
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Practice B *continued*
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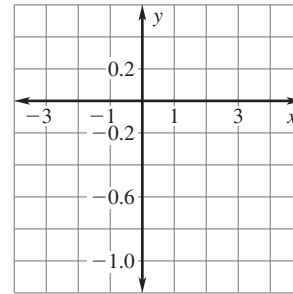
9. $y = 2 \cdot (0.25)^x$



10. $y = -0.5 \cdot (0.3)^x$

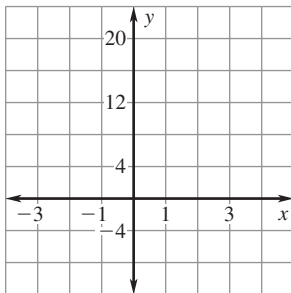


11. $y = -0.2 \cdot (0.2)^x$

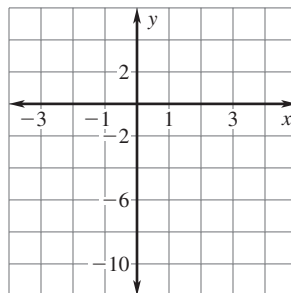


Graph the function. Compare the graph with the graph of $y = \left(\frac{1}{8}\right)^x$.

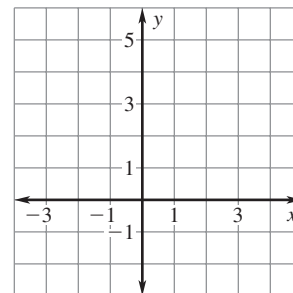
12. $y = 2 \cdot \left(\frac{1}{8}\right)^x$



13. $y = -\left(\frac{1}{8}\right)^x$

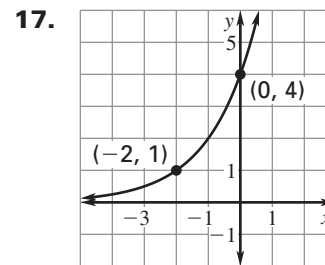
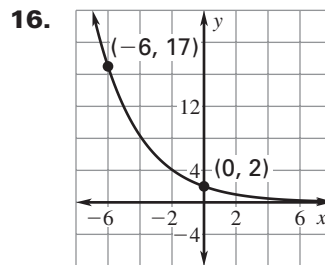
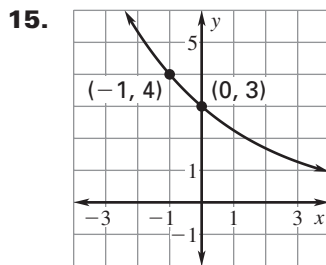


14. $y = \frac{1}{4} \cdot \left(\frac{1}{8}\right)^x$



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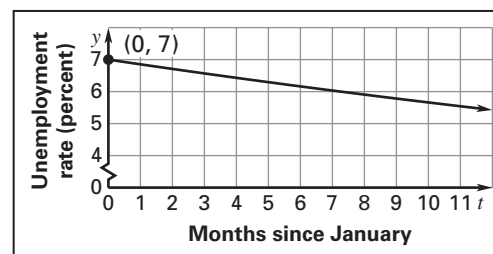
Tell whether the graph represents exponential growth or exponential decay. Then write a rule for the function.



18. **Computer Value** You buy a computer for \$3000. It depreciates at the rate of 20% per year. Find the value of the computer for the given year.
- 1 year
 - 3 years
 - 5 years

19. **Unemployment Rate** In 2000, the unemployment rate of a city decreased by approximately 2.1% each month. In January, the unemployment rate was 7%.

- Use the graph at the right to write a function that models the unemployment rate of the city over time.



- What was the unemployment rate in December?

20. **Indoor Water Park** An indoor water park had a declining attendance from 2000 to 2005. The attendance in 2000 was 18,000. Each year for the next 5 years, the attendance decreased by 5.5%.

- Write a function that models the attendance since 2000.

- What was the attendance in 2005?