

LESSON
7.4**Practice C**

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

Write a rule for the function.

1.

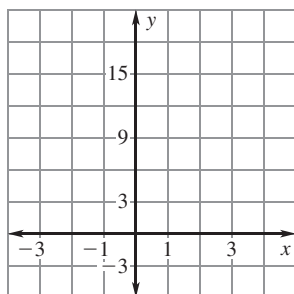
x	-2	-1	0	1	2
y	$-\frac{1}{16}$	$-\frac{1}{4}$	-1	-4	-16

2.

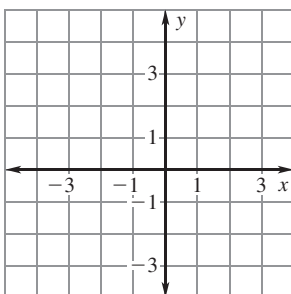
x	-1	0	1	2	3
y	$\frac{5}{2}$	5	10	20	40

Graph the function and identify its domain and range.

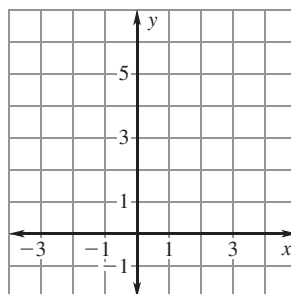
3. $y = 15^x$



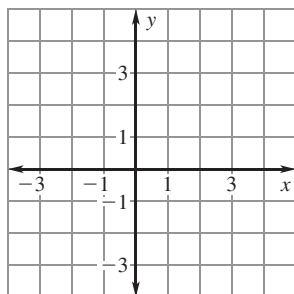
4. $y = (2.25)^x$



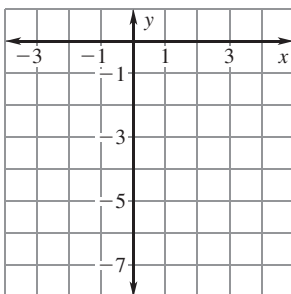
5. $y = (5.2)^x$



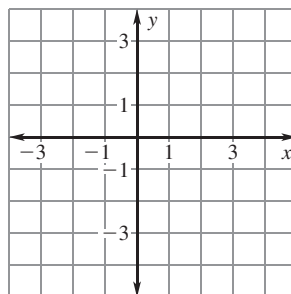
6. $y = \left(\frac{9}{8}\right)^x$



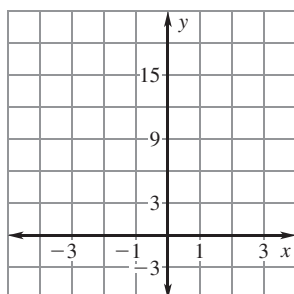
7. $y = -7^x$



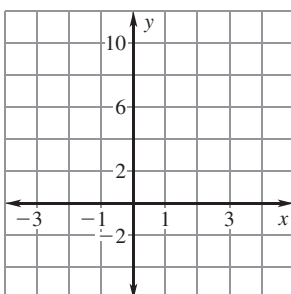
8. $y = -\left(\frac{5}{2}\right)^x$



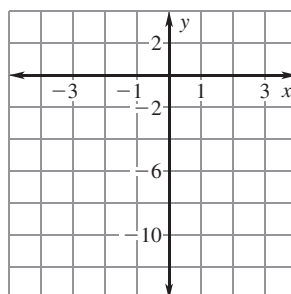
9. $y = 3 \cdot 6^x$



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

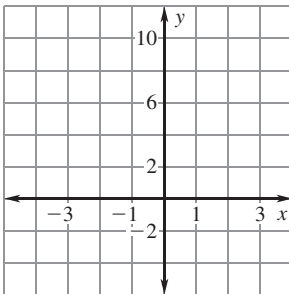


11. $y = -2 \cdot 4^x$

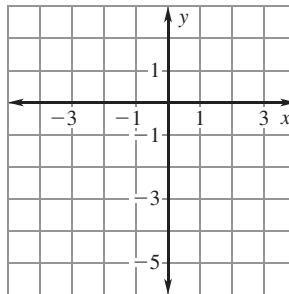


LESSON
7.4
Practice C *continued*
For use with the lesson "Write and Graph Exponential Growth Functions"
Graph the function. Compare the graph with the graph of $y = 5^x$.

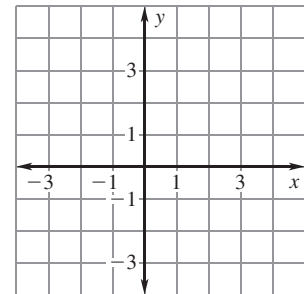
12. $y = 2 \cdot 5^x$



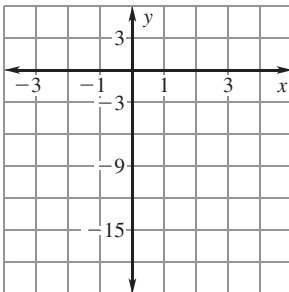
13. $y = -5^x$



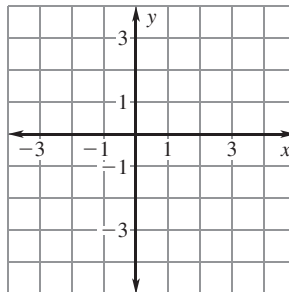
14. $y = \frac{1}{2} \cdot 5^x$



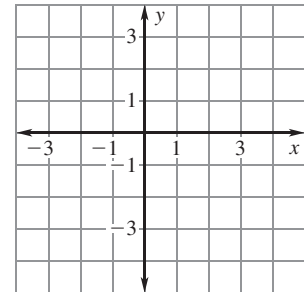
15. $y = -3 \cdot 5^x$



16. $y = -\frac{1}{2} \cdot 5^x$



17. $y = -\frac{3}{4} \cdot 5^x$



- 18. Investments** You deposit \$375 in a savings account that earns 2.75% interest compounded yearly. Find the interest earned by the account after the given amounts of time. *Explain* how you got your answers.

- 1 year
- 5 years
- 20 years

- 19. Population** A town had a population of 65,000 in 2000. Then the population increased by 2.5% each year for the next 5 years.

- Write a function that models the population over time.
- Use the function to predict the population in 2004.

- 20. Internet Users** The number of students who have applied for Internet privileges at school has doubled each month.

- What is the percent of increase each month?
- Ten students had applied for Internet privileges initially. Write a function that models the number of students applying for Internet privileges over time.
- How many students will have applied for Internet privileges in 4 months?