Date _____

Name _

LESSON P

Practice C

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

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

1.	x	-2	-1	0	1	2
	y	$\frac{100}{81}$	$\frac{10}{9}$	1	$\frac{9}{10}$	$\frac{81}{100}$

2.	x	-2	-1	0	1	2
	y	$-\frac{17}{2}$	$-\frac{33}{4}$	-8	$-\frac{31}{4}$	$-\frac{15}{2}$

Graph the function and identify its domain and range.



LESSON 7.5

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Date _



Graph the function. Compare the graph with the graph of $y = \left(\frac{1}{5}\right)^x$.



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







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- **18. Truck Value** You buy a used truck for \$15,000. It depreciates at a rate of 18% per year. Find how much the value of the truck depreciated after the given number of years have passed.
 - **a.** 1 year
 - **b.** 3 years
 - **c.** 5 years
- **19. Sleeping Behavior** On average, as people grow older, they sleep fewer hours during the night. The amount of sleep that your great-aunt gets has decreased by 1.8% since 2000.
 - **a.** Use the graph at the right to write a function that models the number of hours your great-aunt sleeps each night over time.
 - **b.** How many hours of sleep did your aunt average a night in 2003?



20. Investment You invested \$2000 into the stock market in 2000. Your investment increased 6% each year for five years. Over the next five years your investment decreased in value of 6% each year. Did you have the \$2000 again at the end of ten years? *Explain* your reasoning.