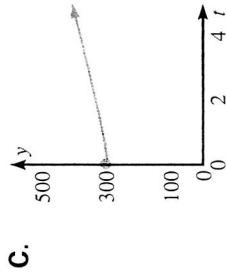
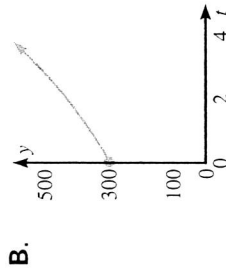
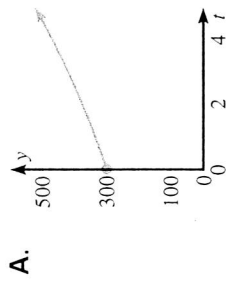


P481, #18 - #24

MATCHING THE GRAPH Match the description with its graph.



18. Deposit: \$300
Annual rate: 6%

19. Deposit: \$300
Annual rate: 12%

20. Deposit: \$300
Annual rate: 20%

BUSINESS In Exercises 21 and 22, write an exponential growth model.

21. A business had a \$10,000 profit in 1990. Then the profit increased by 25% per year for the next 10 years.

22. A business had a \$20,000 profit in 1990. Then the profit increased by 20% per year for the next 10 years.

23. VISUAL THINKING Graph the exponential growth models in Exercises 21 and 22 in the same coordinate plane. Which business would you rather own? Explain.

24. POPULATION GROWTH A population of 30 mice is released in a wildlife region. The population doubles each year for 4 years. What is the population after 4 years?

P488 #17- #22

RECOGNIZING MODELS Classify the model as *exponential growth* or *exponential decay*. Identify the growth or decay factor and the percent of increase or decrease per time period.

17. $y = 24(1.18)^t$

18. $y = 14(0.98)^t$

19. $y = 35\left(\frac{5}{4}\right)^t$

20. $y = 112(0.4)^t$

21. $y = 9\left(\frac{2}{5}\right)^t$

22. $y = 97(1.01)^t$

26. You buy a used truck in 1996 for \$10,500. Each year the truck depreciates by 10%. Write an exponential decay model to represent this situation. Then estimate the value of the truck in 10 years.

In Exercises 27–29, use the following information.

Each year in the month of March, the NCAA basketball tournament is held to determine the national champion. At the start of the tournament there are 64 teams, and after each round, one half of the remaining teams are eliminated.

27. Write an exponential decay model showing the number of teams N left in the tournament after round t .

28. How many teams remain after 3 rounds? after 4 rounds?

29. If a team won 6 games in a row in the tournament, does it mean that it won the national championship? Explain your reasoning.

30. A summer youth camp had a declining enrollment from 1995 to 2000. The enrollment in 1995 was 320 people. Each year for the next five years, the enrollment decreased by 2%. Copy and complete the table showing the enrollment for each year. Sketch a graph of the results.

	1995	1996	1997	1998	1999	2000
	?	?	?	?	?	?

P489, #26 - #30