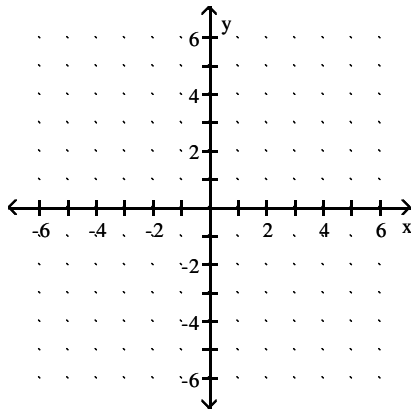
Math 098 Worksheet 8.1B_GraphingExponentialFunctions_v01
NO BOOK/ NO NOTES/YES CALCUATOR
Fall 2017 Dressler

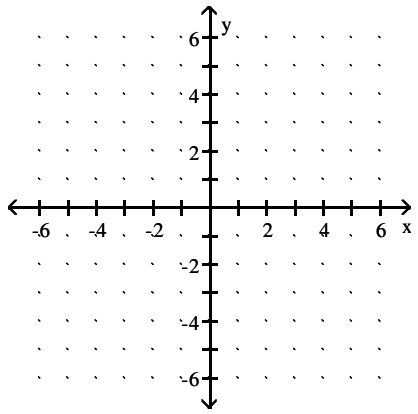
Name_____

Graph the function.

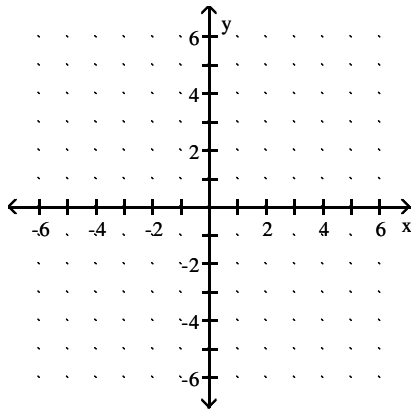
1) $f(x) = 3^x$



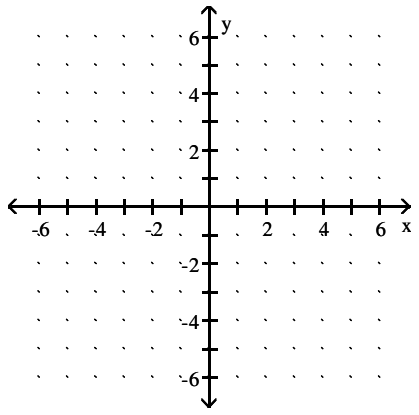
2) $f(x) = 2^x$



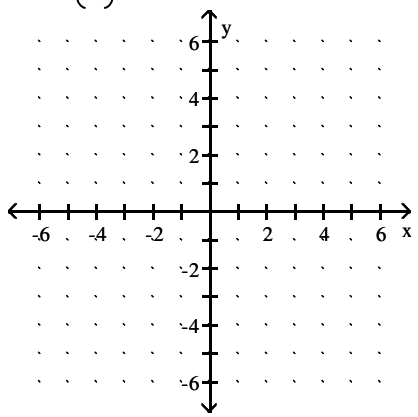
3) $f(x) = 4^x$



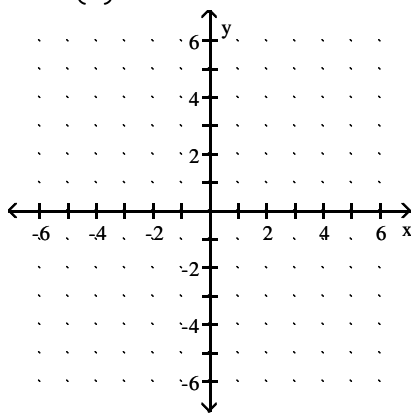
4) $f(x) = 5^x$



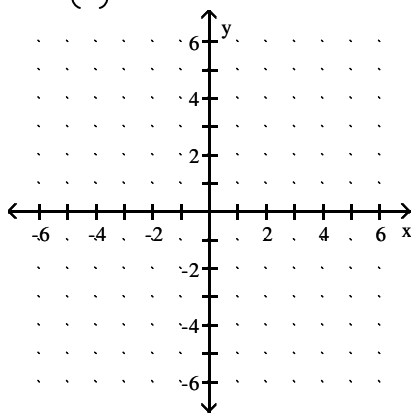
5) $f(x) = \left(\frac{1}{5}\right)^x$



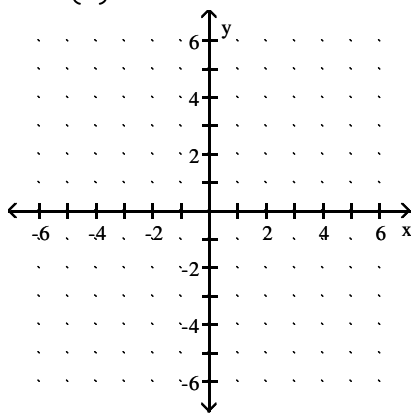
6) $f(x) = \left(\frac{1}{2}\right)^x$



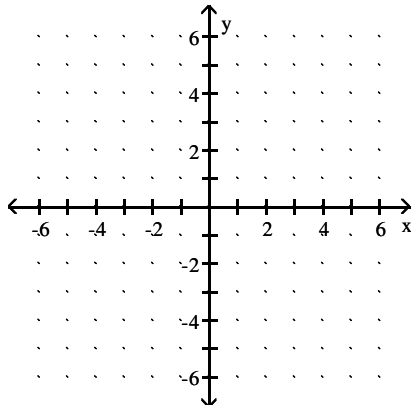
7) $f(x) = \left(\frac{1}{3}\right)^x$



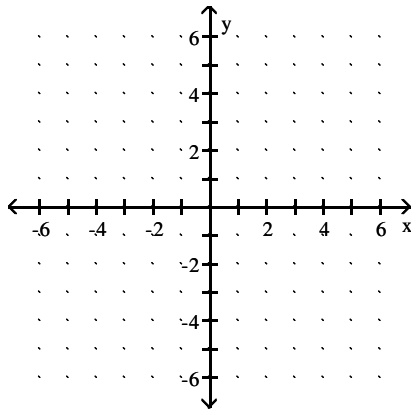
8) $f(x) = \left(\frac{1}{4}\right)^x$



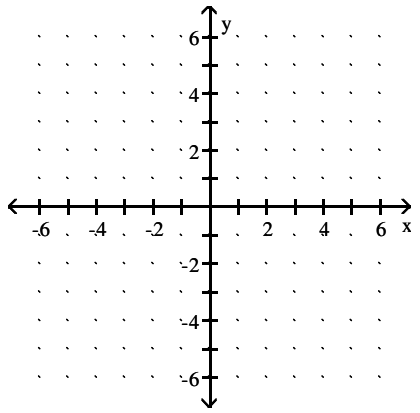
9) $f(x) = 2^{-x}$



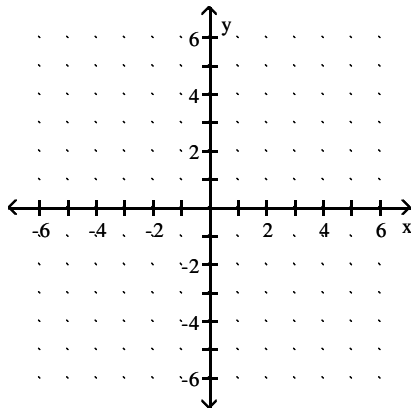
10) $f(x) = 5^{-x}$



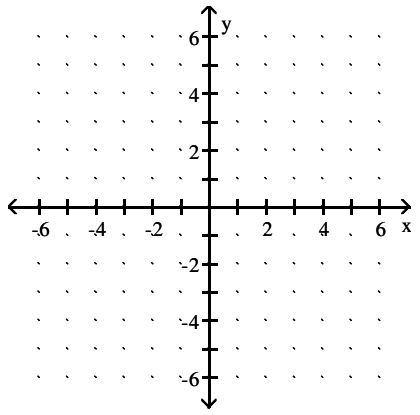
11) $f(x) = 3^{-x}$



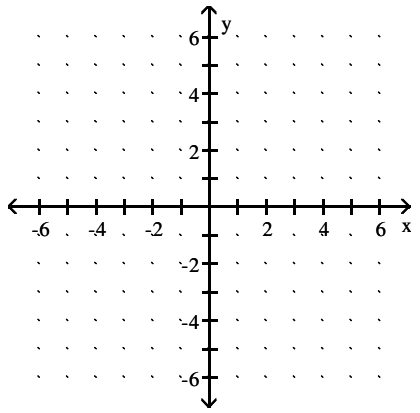
12) $f(x) = 5^{(x-1)}$



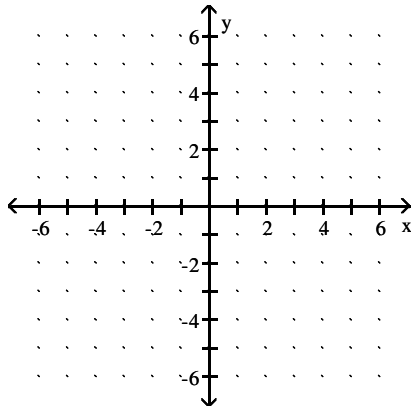
13) $f(x) = 3^{(x-4)}$



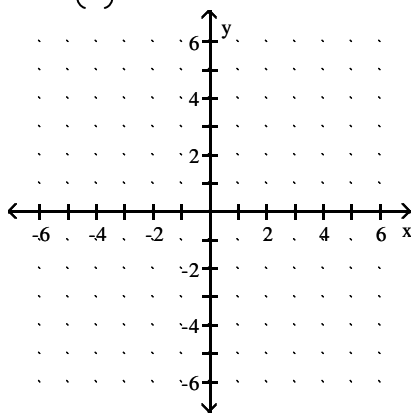
14) $f(x) = 3^{(x-2)}$



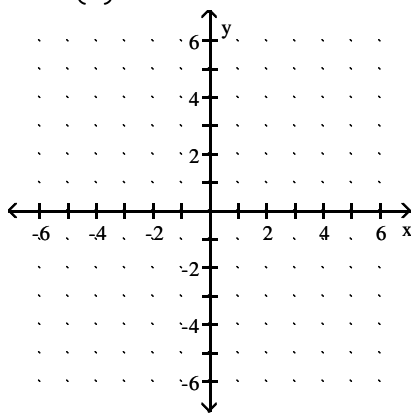
15) $f(x) = \left(\frac{1}{2}\right)^x + 4$



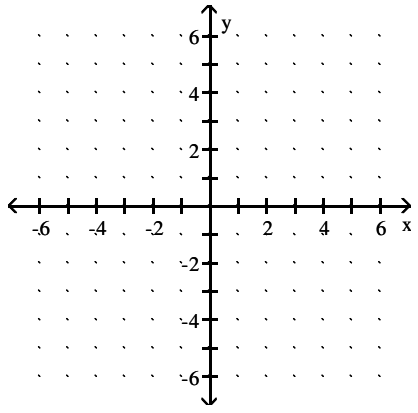
16) $f(x) = \left(\frac{1}{5}\right)^x + 4$



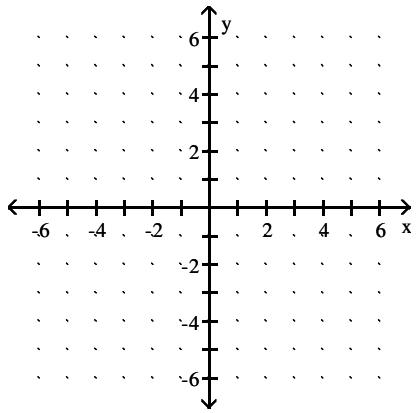
17) $f(x) = \left(\frac{1}{5}\right)^x + 3$



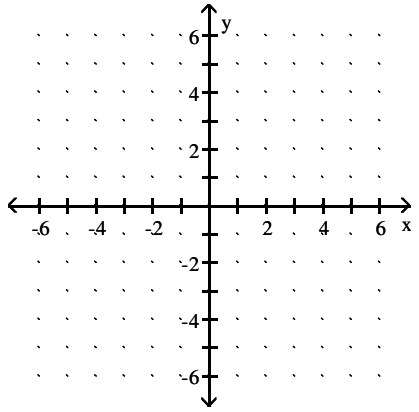
18) $f(x) = 5^{(x-3)} - 3$



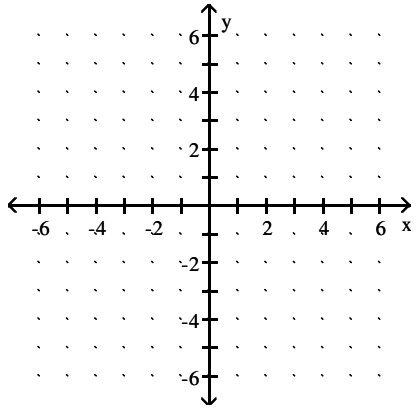
19) $f(x) = 3^{(x-3)} + 3$



20) $f(x) = 4^{(x+4)} + 1$

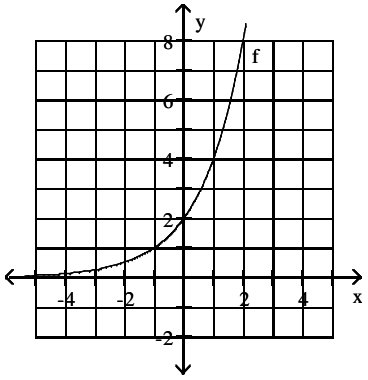


21) $f(x) = 4^{-x}$

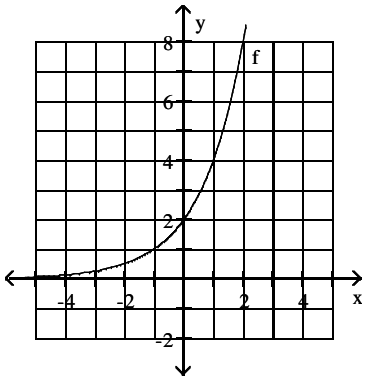


Use the graph to find the requested value.

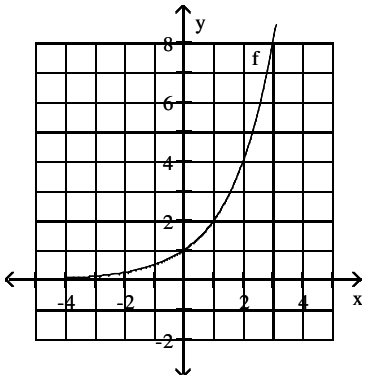
22) Find f(1).



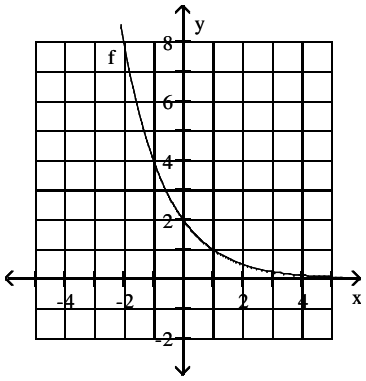
23) Find f(0).



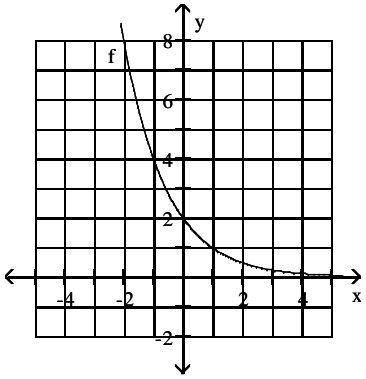
24) Find f(1).



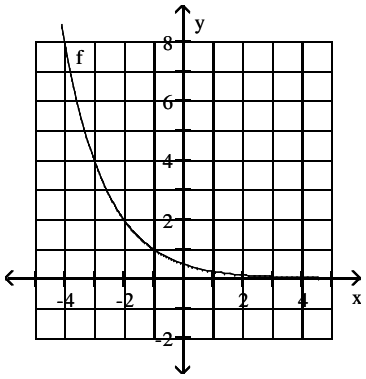
25) Find f(0).



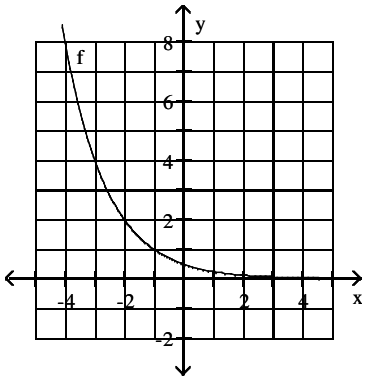
26) Find f(1).



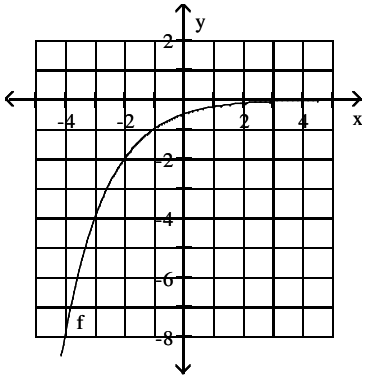
27) Find f(-1).



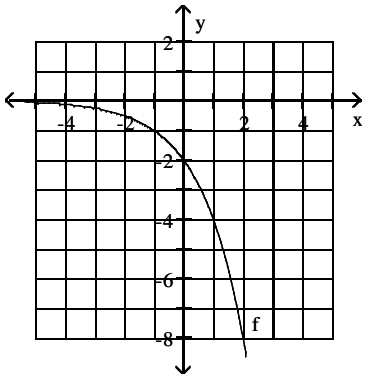
28) Find f(-3).



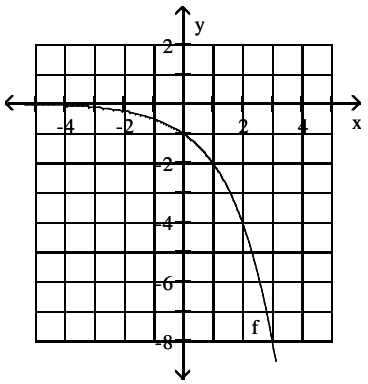
29) Find f(-1).



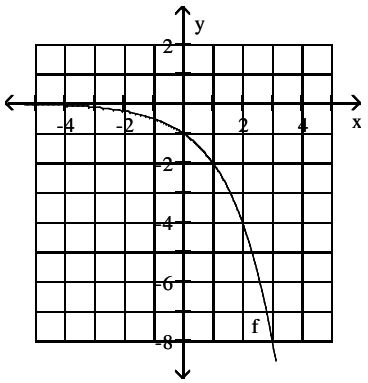
30) Find x where f(x) = -4.



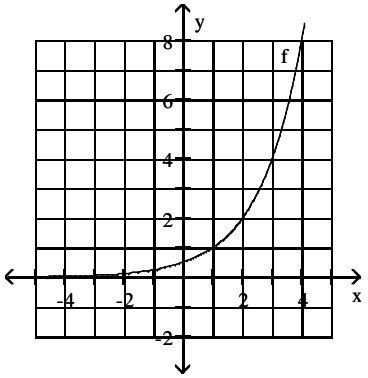
31) Find x where f(x) = -4.



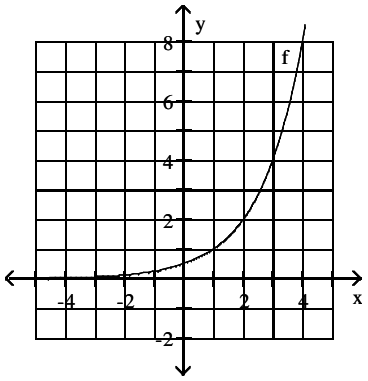
32) Find x where f(x) = -2.



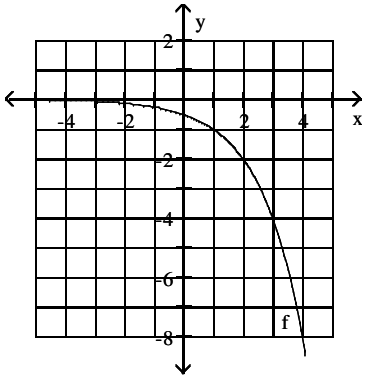
33) Find x where f(x) = 4.



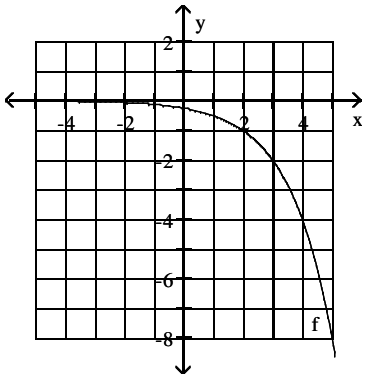
34) Find x where f(x) = 2.



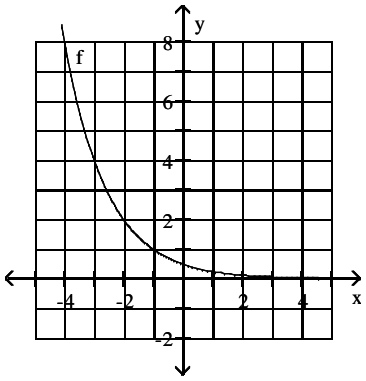
35) Find x when f(x) = -2.



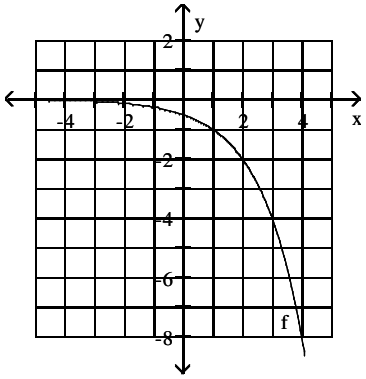
36) Find x when f(x) = -4.



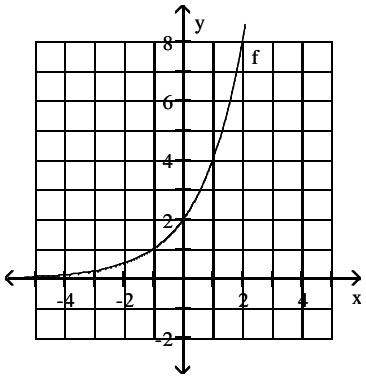
37) Find f(-2).



38) Find x when f(x) = -4.



39) Find f(-1).



Solve the problem.

40) Four bacteria are placed in a petri dish. The population will double every day. How many bacteria are in the dish seven days after the four bacteria are placed in the dish?

41) Three bacteria are placed in a petri dish. The population will triple every day. How many bacteria are in the dish five days after the three bacteria are placed in the dish?

42) Four bacteria are placed in a petri dish. The population will triple every day. How many bacteria are in the dish eight days after the four bacteria are placed in the dish?

43) Four bacteria are placed in a petri dish. The population will triple every day. How many bacteria are in the dish five days after the four bacteria are placed in the dish?

44) Austin invested $12,000 in an account at 8% compounded annually. Find the amount in Austin's account after a period of 7 years.

45) Austin invested $12,000 in an account at 8% compounded annually. Find the amount in Austin's account after a period of 9 years.

46) Austin invested $12,000 in an account at 11% compounded annually. Find the amount in Austin's account after a period of 6 years.

47) Austin invested $12,000 in an account at 8% compounded annually. Find the amount in Austin's account after a period of 8 years.

48) A particular new car is worth $19,537. With each passing year, the value of the car will be 0.81 times its value the previous year. To the nearest dollar, what will the car be worth in 3 years?

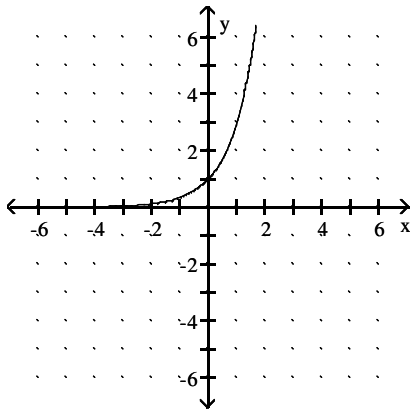
49) A particular new car is worth $19,617. With each passing year, the value of the car will be 0.85 times its value the previous year. To the nearest dollar, what will the car be worth in 3 years?

50) A particular new car is worth $19,551. With each passing year, the value of the car will be 0.81 times its value the previous year. To the nearest dollar, what will the car be worth in 3 years?

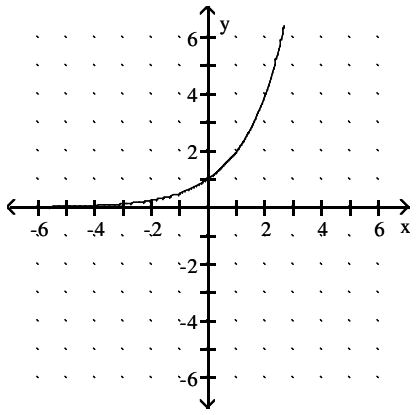
51) A particular new car is worth $19,700. With each passing year, the value of the car will be 0.83 times its value the previous year. To the nearest dollar, what will the car be worth in 3 years?

52) Four bacteria are placed in a petri dish. The population will double every day. How many bacteria are in the dish eight days after the four bacteria are placed in the dish?

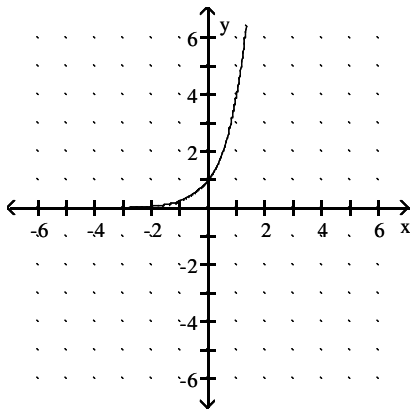
1)



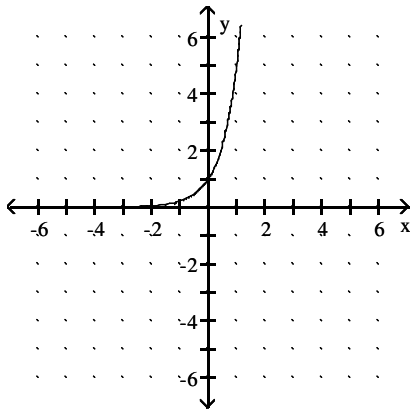
2)



3)



4)



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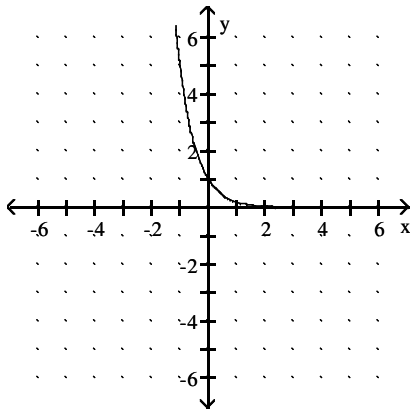

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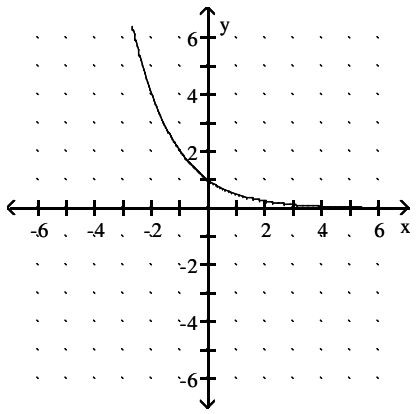

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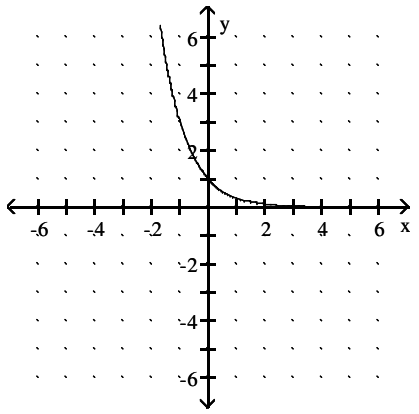
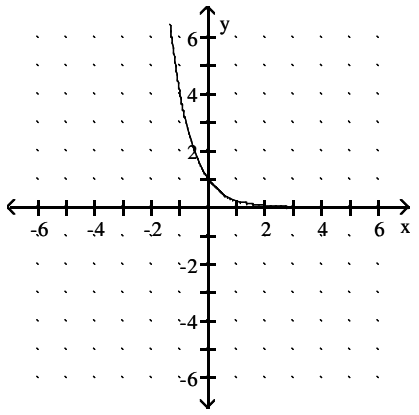


8)



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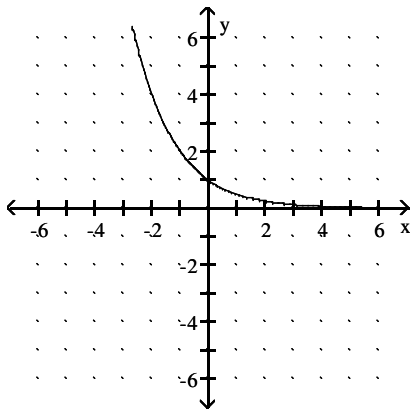
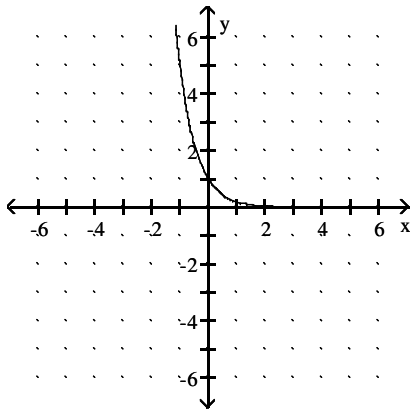
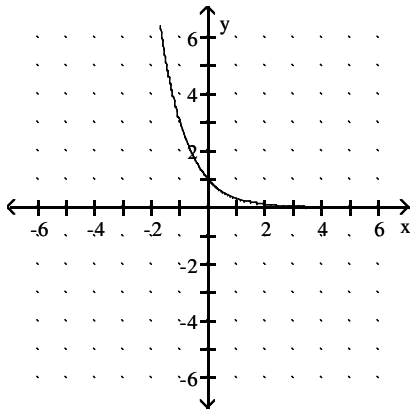


10)



11)



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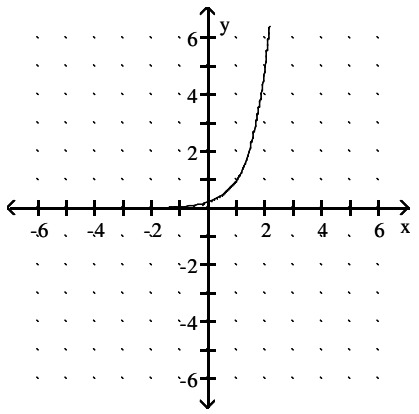

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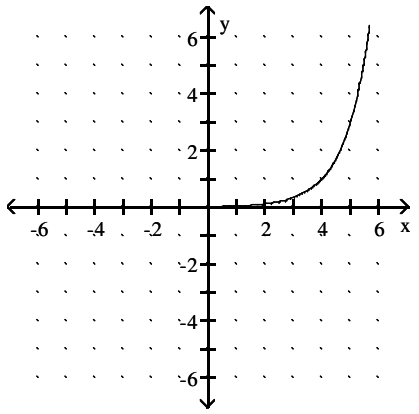

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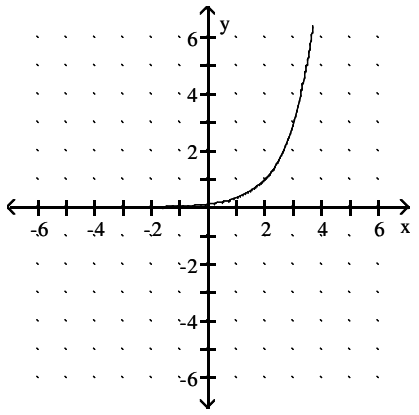

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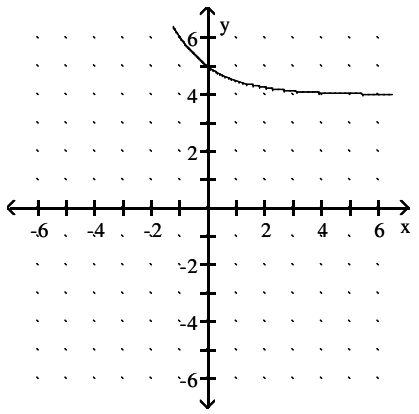

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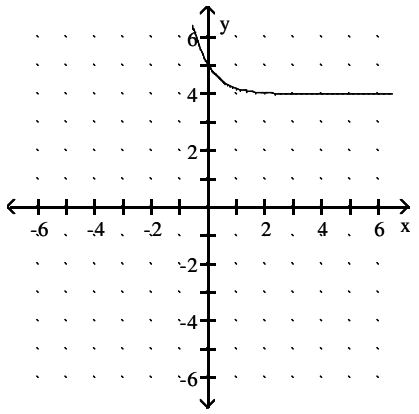

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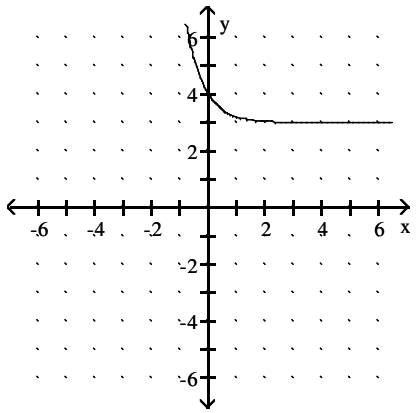

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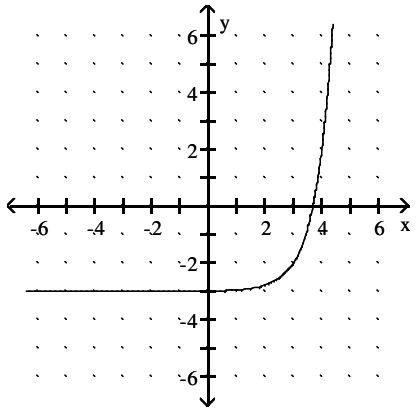

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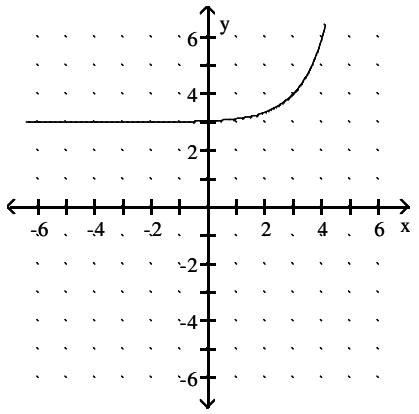

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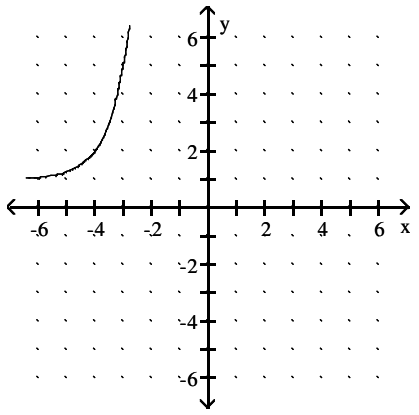

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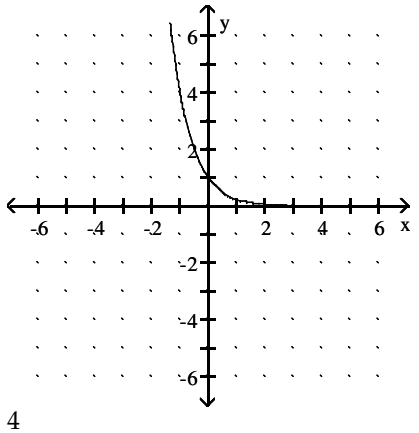

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35) 2
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38) 3
39) 1
40) 512
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43) 972
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49) $12,047
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52) 1024