

Section 5.1 (page 392)

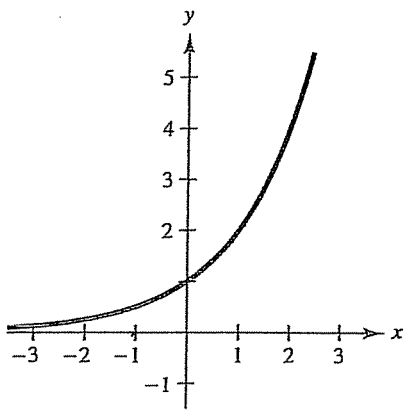
Vocabulary Check (page 392)

1. algebraic    2. transcendental  
 3. natural exponential; natural    4.  $A = P\left(1 + \frac{r}{n}\right)^{nt}$   
 5.  $A = Pe^{rt}$

1. 946.852    2. 3.488    3. 0.006    4. 0.544  
 5. 1767.767    6.  $1.274 \times 10^{25}$   
 7. d    8. c    9. a    10. b

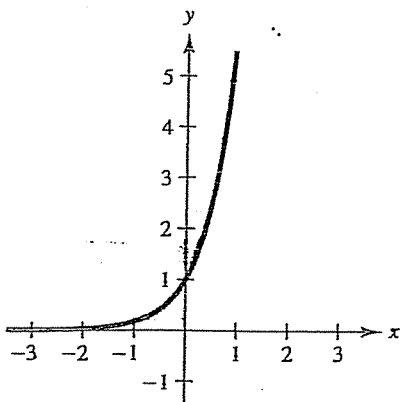
12.

$x$	-2	-1	0	1	2
$f(x)$	0.25	0.5	1	2	4



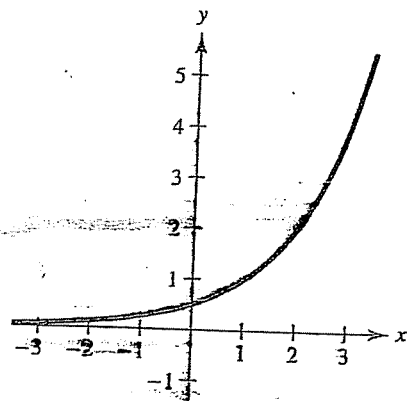
14.

$x$	-2	-1	0	1	2
$f(x)$	0.028	0.167	1	6	36



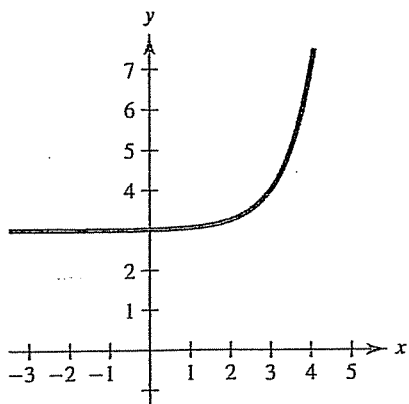
15.

$x$	-2	-1	0	1	2
$f(x)$	0.125	0.25	0.5	1	2

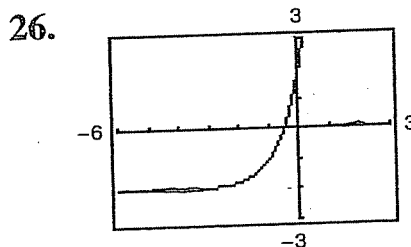
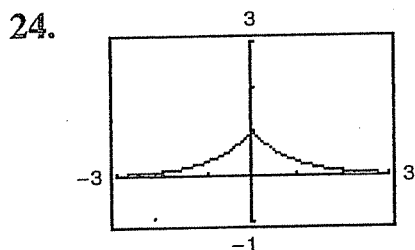


16.

$x$	-1	0	1	2	3
$f(x)$	3.004	3.016	3.063	3.25	4



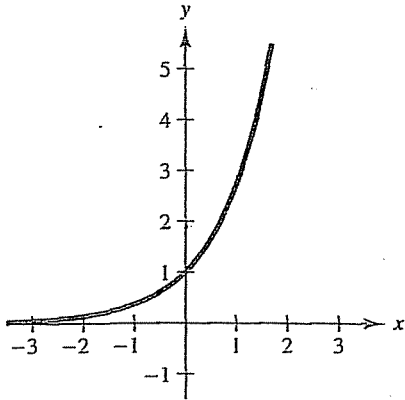
17. Shift the graph of  $f$  four units to the right.  
 18. Shift the graph of  $f$  one unit upward.  
 19. Shift the graph of  $f$  five units upward.  
 20. Reflect the graph of  $f$  in the  $y$ -axis and shift three units to the right.  
 21. Reflect the graph of  $f$  in the  $x$ -axis and  $y$ -axis and shift six units to the right.  
 22. Reflect  $f$  in the  $x$ -axis and shift five units upward.



27. 0.472    28. 24.533    29.  $3.857 \times 10^{-22}$   
 30.  $1.956 \times 10^{52}$     31. 7166.647    32. 679.570

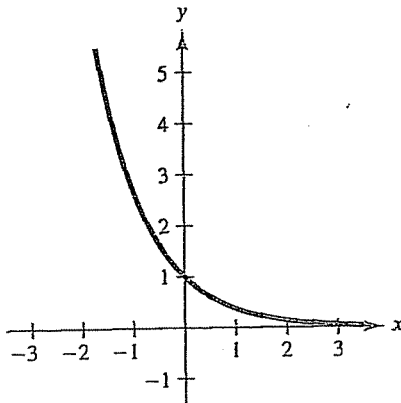
33.

$x$	-2	-1	0	1	2
$f(x)$	0.135	0.368	1	2.718	7.389



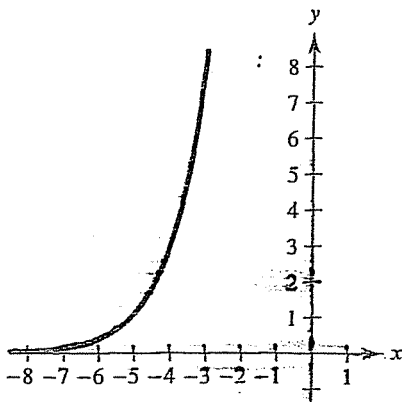
34.

$x$	-2	-1	0	1	2
$f(x)$	7.389	2.718	1	0.368	0.135

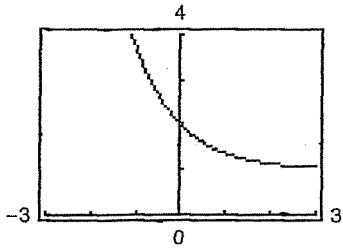


35.

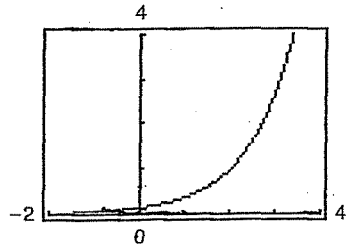
$x$	-8	-7	-6	-5	-4
$f(x)$	0.055	0.149	0.406	1.104	3



43.



44.



45.  $x = 2$     46.  $x = 7$     47.  $x = -3$

48.  $x = -4$     49.  $x = \frac{1}{3}$     50.  $x = \frac{5}{2}$

51.  $x = 3, -1$     52.  $x = 2, 3$

53.

$n$	1	2	4
$A$	\$3200.21	\$3205.09	\$3207.57

$n$	12	365	Continuous
$A$	\$3209.23	\$3210.06	\$3210.06

54.

$n$	1	2	4	12
A	\$1480.24	\$1485.95	\$1488.86	\$1490.83

$n$	365	Continuous
A	\$1491.79	\$1491.82

56.

$n$	1	2	4
A	\$10,285.72	\$10,640.89	\$10,828.46

$n$	12	365	Continuous
A	\$10,957.45	\$11,021.00	\$11,023.18

58.

$t$	10	20	30
A	\$21,865.43	\$39,841.40	\$72,595.77

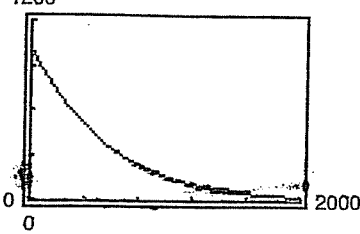
$t$	40	50
A	\$132,278.12	\$241,026.44

60.

$t$	10	20	30
A	\$17,028.81	\$24,165.03	\$34,291.81

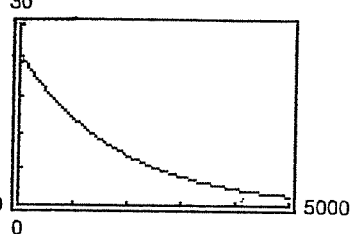
$t$	40	50
A	\$48,662.40	\$69,055.23

61. \$222,822.57      62. \$212,605.41      63. \$35.45

64. (a)  (b) \$421.12  
(c) \$350

65. (a)  $V(1) = 10,000.298$       (b)  $V(1.5) = 100,004.47$   
(c)  $V(2) = 1,000,059.6$

66. (a) Decreasing  
(b)  $P(8) = 147.58$  million  
 $P(10) = 146.44$  million  
(c)  $P(20) = 140.84$  million

67. (a) 25 grams      (b) 16.21 grams  
(c) 

68. (a) 10 grams      (b) 7.85 grams

