

Answers to Even-Numbered Exercises

Exercises 2.1

4. a graph and the following table:

x	$f(x) = 4^x$
-3	0.015625
-2.5	0.03125
-2	0.0625
-1.5	0.125
-1	0.25
-0.5	0.5
0	1
0.5	2
1	4
1.5	8
2	16
2.5	32
3	64

12. a graph and the following table:

x	$f(x) = 4^x$
-3	64
-2.5	32
-2	16
-1.5	8
-1	4
-0.5	2
0	1
0.5	0.5
1	0.25
1.5	0.13
2	0.06
2.5	0.03
3	0.02

18. 48
22. $1/12$
24. a) $A = 2000(1.045^t)$
b) \$2282.33
26. \$3384.20
32. 1692.65

Exercises 2.2

2. a) 9422.52
b) 9451.23
c) 9457.04
4. a) 12,601.21
b) 12,796.37
c) 12,864.07
10. 7046.88
20. e

Exercises 2.3

2. -2
8. -2
16. $1/2$
18. a) 1.699
b) 1.398
c) 1.301
d) 0.903
28. 1.161
34. 6.229
40. $1 - \frac{b}{2}$
44. $1/b$
46. 1.58 times as severe (i.e. 58% worse)

Exercises 2.4

4. $e^{\frac{1}{2} \ln x}$

12. 0.23

16. 8

20. 0.614

38. $\pm\sqrt{\ln 10}$

42. $x = \frac{3}{2} + \frac{1}{2e}$

58. (graph)

66. 6.758

72. a) $k = 0.01263$, $A = 79.45$

b) 361.60 million

c) 79.43 million

76. a) 74.6 milligrams

b) 49.3 years

c) 49.3 years

d) 28.4 years