Chapter 1 | Whole Numbers and Decimals

1.1 Whole Numbers

1. 7040
   seven thousand, forty

2. 5310
   five thousand, three hundred ten

3. 37,901
   thirty-seven thousand, nine hundred one

4. 725,069
   seven hundred twenty-five thousand, sixty-nine

5. 4,650,015
   four million, six hundred fifty thousand, fifteen

6. 3,765,041,000
   three billion, seven hundred sixty-five million, forty-one thousand

7. 2065 to the nearest ten is 2070.
   Draw a line under the tens digit.

   20<u>6</u>5

   Since the digit to the right of that place is 5, increase the tens digit by 1. Change all digits to the right of the tens place to zero.

   2065 to the nearest hundred is 2100.
   Draw a line under the hundreds digit.

   2<u>0</u>65

   Since the digit to the right of that place is 6, increase the hundreds digit by 1. Change all digits to the right of the hundreds place to zero.

   2065 to the nearest thousand is 2000.
   Draw a line under the thousands digit.

   <u>2</u>065

   Since the digit to the right of that place is 0, do not change the thousands digit. Change all digits to the right of the thousands place to zero.

8. 8385 to the nearest ten is 8390.
   Draw a line under the tens digit.

   83<u>8</u>5

   Since the digit to the right of that place is 5, increase the tens digit by 1. Change all digits to the right of the tens place to zero.

   8385 to the nearest hundred is 8400.
   Draw a line under the hundreds digit.

   8<u>3</u>85

   Since the digit to the right of that place is 8, increase the hundreds digit by 1. Change all digits to the right of the hundreds place to zero.

   8385 to the nearest thousand is 8000.
   Draw a line under the thousands digit.

   <u>8</u>385

   Since the digit to the right of that place is 3, do not change the thousands digit. Change all digits to the right of the thousands place to zero.

9. 46,231 to the nearest ten is 46,230.
   Draw a line under the tens digit.

   46,2<u>3</u>1

   Since the digit to the right of that place is 1, do not change the tens digit. Change all digits to the right of the tens place to zero.

   46,231 to the nearest hundred is 46,200.
   Draw a line under the hundreds digit.

   46,<u>2</u>31

   Since the digit to the right of that place is 3, do not change the hundreds digit. Change all digits to the right of the hundreds place to zero.

   46,231 to the nearest thousand is 46,000.
   Draw a line under the thousands digit.

   46,<u>2</u>31

   Since the digit to the right of that place is 2, do not change the thousands digit. Change all digits to the right of the thousands place to zero.

10. 55,175 to the nearest ten is 55,180.
Draw a line under the tens digit.

$$55,1\underline{7}5$$

Since the digit to the right of that place is 5, increase the tens digit by 1. Change all digits to the right of the tens place to zero.

55,175 to the nearest hundred is 55,200.
Draw a line under the hundreds digit.

$$55,\underline{1}75$$

Since the digit to the right of that place is 7, increase the hundreds digit by 1. Change all digits to the right of the hundreds place to zero.

55,175 to the nearest thousand is 55,000.
Draw a line under the thousands digit.

$$5\underline{5},175$$

Since the digit to the right of that place is 1, do not change the thousands digit. Change all digits to the right of the thousands place to zero.

11. 106,054 to the nearest ten is 106,050.
Draw a line under the tens digit.

$$106,0\underline{5}4$$

Since the digit to the right of that place is 4, do not change the tens digit. Change all digits to the right of the tens place to zero.

106,054 to the nearest hundred is 106,100.
Draw a line under the hundreds digit.

$$106,\underline{0}54$$

Since the digit to the right of that place is 5, increase the hundreds digit by 1. Change all digits to the right of the hundreds place to zero.

106,054 to the nearest thousand is 106,000.
Draw a line under the thousands digit.

$$10\underline{6},054$$

Since the digit to the right of that place is 0, do not change the thousands digit. Change all digits to the right of the thousands place to zero.

12. 359,874 to the nearest ten is 359,870.
Draw a line under the tens digit.

$$359,8\underline{7}4$$

Since the digit to the right of that place is 4, do not change the tens digit. Change all digits to the right of the tens place to zero.

359,874 to the nearest hundred is 359,900.
Draw a line under the hundreds digit.

$$359,\underline{8}74$$

Since the digit to the right of that place is 7, increase the hundreds digit by 1. Change all digits to the right of the hundreds place to zero.

359,874 to the nearest thousand is 360,000.
Draw a line under the thousands digit.

$$35\underline{9},874$$

Since the digit to the right of that place is 8, increase the thousands digit by 1. 59 increased by 1 is 60. Change all other digits to the right of the thousands place to zero.

13. Answers will vary.

14. Answers will vary.

15.
$$\begin{array}{r} 75 \\ 63 \\ 45 \\ + 27 \\ \hline 210 \end{array}$$

16.
$$\begin{array}{r} 57 \\ 26 \\ 43 \\ + 18 \\ \hline 144 \end{array}$$

17.
$$\begin{array}{r} 875 \\ 364 \\ 171 \\ + 776 \\ \hline 2186 \end{array}$$

18.
$$\begin{array}{r} 135 \\ 594 \\ 415 \\ + 276 \\ \hline 1420 \end{array}$$

19.
$$
\begin{array}{r}
750 \\
91 \\
8 \\
540 \\
+\ \ 7 \\
\hline
1396
\end{array}
$$

20.
$$
\begin{array}{r}
371 \\
45 \\
839 \\
3 \\
+\ 47 \\
\hline
1305
\end{array}
$$

21.
$$
\begin{array}{r}
311,479 \\
77,631 \\
+\ 594,383 \\
\hline
983,493
\end{array}
$$

22.
$$
\begin{array}{r}
803,526 \\
759,991 \\
+\ \ 36,024 \\
\hline
1,599,541
\end{array}
$$

23.
$$
\begin{array}{r}
896 \\
-\ 228 \\
\hline
668
\end{array}
$$

24.
$$
\begin{array}{r}
757 \\
-\ 286 \\
\hline
471
\end{array}
$$

25.
$$
\begin{array}{r}
3715 \\
-\ 838 \\
\hline
2877
\end{array}
$$

26.
$$
\begin{array}{r}
6215 \\
-\ 767 \\
\hline
5448
\end{array}
$$

27.
$$
\begin{array}{r}
65,198 \\
-\ 43,652 \\
\hline
21,546
\end{array}
$$

28.
$$
\begin{array}{r}
445,193 \\
-\ 62,785 \\
\hline
382,408
\end{array}
$$

29.
$$
\begin{array}{r}
7,025,389 \\
-\ 936,490 \\
\hline
6,088,899
\end{array}
$$

30.
$$
\begin{array}{r}
9,807,943 \\
-\ 959,489 \\
\hline
8,848,454
\end{array}
$$

31. Adding across the rows, we get the following.

$$
\begin{array}{r}
\$49,802 \\
\$36,911 \\
\$47,851 \\
\$54,732 \\
\$29,852 \\
+\ \$74,119 \\
\hline
\$293,267
\end{array}
\qquad
\begin{array}{r}
\$86,154 \\
\$72,908 \\
\$31,552 \\
\$74,944 \\
\$85,532 \\
+\ \$36,705 \\
\hline
\$387,795
\end{array}
$$

$$
\begin{array}{r}
\$59,854 \\
\$85,119 \\
\$87,914 \\
\$45,812 \\
\$56,314 \\
+\ \$91,856 \\
\hline
\$426,869
\end{array}
\qquad
\begin{array}{r}
\$73,951 \\
\$72,564 \\
\$39,615 \\
\$71,099 \\
\$72,918 \\
+\ \$42,953 \\
\hline
\$373,100
\end{array}
$$

$\$293,267 + \$387,795 + \$426,869 + \$373,100$
$= \$1,481,031$

Adding down the columns, we get the following.

$$
\begin{array}{r}
\$49,802 \\
\$86,154 \\
\$59,854 \\
+\ \$73,951 \\
\hline
\$269,761
\end{array}
\qquad
\begin{array}{r}
\$36,911 \\
\$72,908 \\
\$85,119 \\
+\ \$72,564 \\
\hline
\$267,502
\end{array}
$$

$$
\begin{array}{r}
\$47,851 \\
\$31,552 \\
\$87,914 \\
+\ \$39,615 \\
\hline
\$206,932
\end{array}
\qquad
\begin{array}{r}
\$54,732 \\
\$74,944 \\
\$45,812 \\
+\ \$71,099 \\
\hline
\$246,587
\end{array}
$$

$$
\begin{array}{r}
\$29,852 \\
\$85,532 \\
\$56,314 \\
+\ \$72,918 \\
\hline
\$244,616
\end{array}
\qquad
\begin{array}{r}
\$74,119 \\
\$36,705 \\
\$91,856 \\
+\ \$42,953 \\
\hline
\$245,633
\end{array}
$$

$\$269,761 + \$267,502 + \$206,932$
$+\$246,587 + \$244,616 + \$245,633$
$= \$1,481,031$

32. Adding across the rows, we get the following.

$29,806	$92,143
$31,712	$86,599
$40,909	$97,194
$32,514	$72,815
$18,902	$89,500
+ $23,514	+ $63,754
$177,357	$502,005

$31,802	$15,746
$39,515	$12,986
$58,192	$32,325
$32,544	$41,983
$41,920	$39,814
+ $48,732	+ $20,605
$252,705	$163,459

$177,357 + $502,005 + $252,705 + $163,459$
$= $1,095,526$

Adding down the columns, we get the following.

$29,806	$31,712
$92,143	$86,599
$31,802	$39,515
+ $15,746	+ $12,986
$169,497	$170,812

$40,909	$32,514
$97,194	$72,815
$58,192	$32,544
+ $32,325	+ $41,983
$228,620	$179,856

$18,902	$23,514
$89,500	$63,754
$41,920	$48,732
+ $39,814	+ $20,605
$190,136	$156,605

$169,497 + $170,812 + $228,620$
$+ $179,856 + $190,136 + $156,605$
$= $1,095,526$

33.

$$\begin{array}{r} 218 \\ \times\ 43 \\ \hline 654 \\ 872\ \\ \hline 9374 \end{array}$$

34.

$$\begin{array}{r} 672 \\ \times\ 56 \\ \hline 4\ 032 \\ 33\ 60\ \\ \hline 37,632 \end{array}$$

35.

$$\begin{array}{r} 1896 \\ \times\ \ \ 62 \\ \hline 3\ 792 \\ 113\ 76\ \\ \hline 117,552 \end{array}$$

36.

$$\begin{array}{r} 7318 \\ \times\ \ \ 38 \\ \hline 58\ 544 \\ 219\ 54\ \\ \hline 278,084 \end{array}$$

37.

$$\begin{array}{r} 6452 \\ \times\ \ \ \ 263 \\ \hline 1\ 9\ 356 \\ 387\ 12\ \\ 129\ 04\ \ \\ \hline 1,696,876 \end{array}$$

38.

$$\begin{array}{r} 7143 \\ \times\ \ \ \ 295 \\ \hline 35\ 715 \\ 64\ 287\ \\ 1\ 4286\ \ \\ \hline 2,107,185 \end{array}$$

39.

$$\begin{array}{r} 1109 \\ \times\ \ \ \ 7311 \\ \hline 1\ 109 \\ 11\ 09\ \\ 332\ 7\ \ \\ 7\ 763\ \ \ \\ \hline 8,107,899 \end{array}$$

40.

$$\begin{array}{r} 9503 \\ \times\ \ \ \ 3411 \\ \hline 9\ 503 \\ 95\ 03\ \\ 3\ 801\ 2\ \ \\ 28\ 509\ \ \ \\ \hline 32,414,733 \end{array}$$

41.

Estimate		Exact
8,000	←	8,215
60	←	56
700	←	729
+ 4,000	←	+ 3,605
12,760		12,605

42.

Estimate		Exact
3,000	←	2,685
70	←	73
600	←	592
+ 7,000	←	+ 7,183
10,670		10,533

43.

Estimate		Exact
800	←	783
− 200	←	− 238
600		545

44.

Estimate		Exact
900	←	942
− 300	←	− 286
600		656

45.

Estimate		Exact
600	←	638
× 50	←	× 47
30,000		29,986

46.

Estimate		Exact
900	←	864
× 70	←	× 74
63,000		63,936

47.

$$\begin{array}{r} 370 \\ \times 180 \\ \hline \end{array} \qquad \begin{array}{r} 37 \\ \times 18 \\ \hline 666 \text{ + 2 zeros} \end{array}$$

66,600

48.

$$\begin{array}{r} 520 \\ \times 400 \\ \hline \end{array} \qquad \begin{array}{r} 52 \\ \times 4 \\ \hline 208 \text{ + 3 zeros} \end{array}$$

208,000

49.

$$\begin{array}{r} 3760 \\ \times 6000 \\ \hline \end{array} \qquad \begin{array}{r} 376 \\ \times 6 \\ \hline 2256 \text{ + 4 zeros} \end{array}$$

22,560,000

50.

$$\begin{array}{r} 7200 \\ \times 1300 \\ \hline \end{array} \qquad \begin{array}{r} 72 \\ \times 13 \\ \hline 936 \text{ + 4 zeros} \end{array}$$

9,360,000

51.

$$\begin{array}{r} 1241 \text{ R1} \\ 4{\overline{)4965}} \\ \underline{4} \\ 09 \\ \underline{8} \\ 16 \\ \underline{16} \\ 05 \\ \underline{4} \\ 1 \end{array}$$

52.

$$\begin{array}{r} 1,887 \text{ R5} \\ 7{\overline{)13,214}} \\ \underline{7} \\ 62 \\ 56 \\ \overline{61} \\ \underline{56} \\ 54 \\ \underline{49} \\ 5 \end{array}$$

53.

$$\begin{array}{r} 458 \text{ R21} \\ 43{\overline{)19,715}} \\ 172 \\ \overline{25\ 1} \\ 21\ 5 \\ \overline{365} \\ \underline{344} \\ 21 \end{array}$$

54.

$$\begin{array}{r} 875 \text{ R77} \\ 93{\overline{)81,452}} \\ 74\ 4 \\ \overline{70\ 5} \\ 65\ 1 \\ \overline{542} \\ \underline{465} \\ 77 \end{array}$$

55. Answers will vary.

56. Answers will vary.

57. $180\overline{)429,350}$

$$\begin{array}{r} 2,385 \text{ R}5 \\ 18\overline{)42,935} \\ \underline{36} \\ 6\,9 \\ 5\,4 \\ \overline{1\,53} \\ \underline{1\,44} \\ 95 \\ \underline{90} \\ 5 \end{array}$$

58. $320\overline{)360,990}$

$$\begin{array}{r} 1,128 \text{ R}3 \\ 32\overline{)36,099} \\ \underline{32} \\ 4\,0 \\ \underline{3\,2} \\ 89 \\ \underline{64} \\ 259 \\ \underline{256} \\ 3 \end{array}$$

59. $1300\overline{)75,800}$

$$\begin{array}{r} 58 \text{ R}4 \\ 13\overline{)758} \\ \underline{65} \\ 108 \\ \underline{104} \\ 4 \end{array}$$

60. $1600\overline{)253,100}$

$$\begin{array}{r} 158 \text{ R}3 \\ 16\overline{)2531} \\ \underline{16} \\ 93 \\ \underline{80} \\ 131 \\ \underline{128} \\ 3 \end{array}$$

61. 2,240,000
two million, two hundred forty thousand

62. 8,534,350
eight million, five hundred thirty-four
thousand, three hundred fifty

63. 3,200,000
three million, two hundred thousand

64. 15,461,800,000,000
fifteen trillion, four hundred sixty-one billion,
eight hundred million dollars

65. eight hundred fifty-four thousand, seven
hundred ninety-five
854,795

66. two billion
2,000,000,000

67. fifty-five million, five hundred seventy-two
thousand, six hundred thirty-three
55,572,633

68. six hundred forty-eight million
648,000,000

69.

$$\begin{array}{r} 5000 \\ \times\ 40 \end{array} \qquad \begin{array}{r} 5 \\ \times 4 \\ \hline 20 \end{array} \quad + 4 \text{ zeros}$$

There are 200,000 chips in 40 pounds.

70.

$$\begin{array}{r} 33,000,000 \\ \times\qquad\ 30 \end{array} \qquad \begin{array}{r} 33 \\ \times 3 \\ \hline 99 \end{array} \quad + 7 \text{ zeros}$$

990,000,000 Hershey Kisses can be produced
in 30 days.

71. $900 + 400 + 500 + 200 = 2000$

$2000 \div 4 = 500$

Jim restocks 500 items per hour.

72. $1801 + 927 + 2088 + 580 + 1049 = 6445$

$6445 \div 5 = 1289$

There is an average of 1289 sold per week.

73. A total of $6 + 15 + 10 + 5 = 36$ rafts were
rented.

$6 \times \$70 = \$420$
$15 \times \$95 = \$1425$
$10 \times \$165 = \$1650$
$5 \times \$180 = \$900$
$36 \times \$3 = \$108$

$\$420 + \$1425 + \$1650 + \$900 + \$108$
$= \$4503$
Total receipts were \$4503.

74. A total of $38 + 73 + 58 + 46 = 215$ rafts were
rented.

$38 \times \$70 = \$2660$
$73 \times \$95 = \$6935$
$58 \times \$165 = \$9570$
$46 \times \$180 = \$8280$
$215 \times \$3 = \$645$

$\$2660 + \$6935 + \$9570 + \$8280 + \$645$
$= \$28,090$
Total receipts were \$28,090.

75. $51,062 + 27,870 + 24,912 + 24,353$
$= 128,197$
There were 128,197 thousand or 128,197,000 egg-laying chickens in the top four states.

76. $50,000 + 30,000 + 20,000$
$+ 20,000 + 20,000 + 20,000$
$= 160,000$
The total number of egg-laying chickens from all states shown is 160,000 thousand or 160,000,000.

77. $51,062 - 18,769 = 32,293$
There are 32,293 thousand or 32,293,000 more egg-laying chickens in Iowa than in Texas.

78. $(51,062 + 27,870) - (20,024 + 18,769)$
$= 78,932 - 38,793 = 40,139$
There are 40,139 thousand or 40,139,000 more egg-laying chickens in Iowa and Ohio combined compared to California and Texas combined.

79. $6.5 \times 1000 = 6500$
There are 6500 Family Dollar retail stores.

80. $8 \times 1000 = 8000$
There are 8000 7-Eleven stores.

81. $8.5 \times 1000 = 8500$
Dollar General has the largest number of retail stores, with 8500 stores.

82. $5 \times 1000 = 5000$
Rite-Aid has the fewest retail stores, with 5000 stores.

83. $8.5 \times 1000 = 8500$ Dollar General stores
$6 \times 1000 = 6000$ Walgreens stores

$8500 - 6000 = 2500$
Dollar General has 2500 more retail stores than Walgreens.

84. $7 \times 1000 = 7000$ CVS stores
$6 \times 1000 = 6000$ Walgreens stores

$7000 - 6000 = 1000$
CVS has 1000 more retail stores than Walgreens.

1.2 Application Problems

1. $602 + 935 + 1328 + 757 + 1586 = 5208$
Subway sold 5208 sandwiches.

2. $80 + 75 + 135 + 40 + 52 = 382$
Rob rode 382 miles.

3. $3020 - 2920 = 100$
100 billion fewer miles were driven.

4. $81,465 - 70,449 = 11,016$
11,016 more Ford Explorers were sold.

5. $607 \times 365 = 221,555$
221,555 World War II veterans are projected to die in the next 365 days.

6. $16 \times 1,100,000 = 17,600,000$
There were approximately 17,600,000 World War II veterans.

7. $8375 - 762 = 7613$
$7613 + 976 = 8589$
The weight of the boat is 8589 pounds.

8. $(\$195 + \$180 + \$205) - (\$85 + \$62 + \$92)$
$= \$580 - \$239 = \$341$
The savings is $341.

9. $\$499 - \$435 = \$64$
The decrease in price was $64.

10. $21,375 - 9250 = 12,125$
The weight of the firewood is 12,125 pounds.

11. $43,560 \times 140 = 6,098,400$
There are 6,098,400 square feet in 140 acres.

12. 40 million $\times 365 = 14,600$ million
14,600 million or 14,600,000,000 checks are processed in a year.

13. $\$225 - \$75 = \$150, \ 7 \times \$150 = \$1050$
The amount saved is $1050.

14. $\$645 - \$74 = \$571; \ 4 \times \$571 = \$2284$
The amount saved is $2284.

15. $6 \times \$1256 = \$ \ 7,536$
$15 \times \$895 = \$13,425$
Total $= \overline{\$20,961}$
The total cost is $20,961.

16. $32 \times \$1538 = \$49,216$
$28 \times \$887 = \$24,836$
Total $= \overline{\$74,052}$
The total cost is $74,052.

17. $\$7588 - \$838 = \$6750$
$6750 was raised.

$\$6750 \div 18 = \$375$
Each team received $375.

18. $(\$60 \times 2) - \$98 = \$120 - \$98 = \$22$
The total profit per hour is $22.

$\$22 \times 35 = \$770$
Smith's profit for the week is $770.

19. $30 \times 25 = 750$
$1250 - 750 = 500$
There are 500 balcony seats

$500 \div 25 = 20$
There must be 20 seats in each row.

20. $82 \times 40 \times 5 \times 50 = 820,000$
There are 820,000 calls per year.

$820,000 \div 17,000 = 48$ R4000,
which rounds to 49.
A minimum of 49 call center operators are
needed.

1.3 Decimal Numbers

1. .38
thirty-eight hundredths

2. .91
ninety-one hundredths

3. 5.61
five and sixty-one hundredths

4. 6.53
six and fifty-three hundredths

5. 7.408
seven and four hundred eight thousandths

6. 1.254
one and two hundred fifty-four thousandths

7. 37.593
thirty-seven and five hundred ninety-three
thousandths

8. 20.903
twenty and nine hundred three thousandths

9. 4.0062
four and sixty-two ten-thousandths

10. 9.0201
nine and two hundred one ten-thousandths

11. Answers will vary.

12. Answers will vary.

13. four hundred thirty-eight and four tenths
438.4

14. six hundred five and seven tenths
605.7

15. ninety-seven and sixty-two hundredths
97.62

16. seventy-one and thirty-three hundredths
71.33

17. one and five hundred seventy-three ten-
thousandths
1.0573

18. nine and three hundred eight ten-thousandths
9.0308

19. three and five thousand eight hundred
twenty-seven ten-thousandths
3.5827

20. two thousand seventy-four ten-thousandths
.2074

21. $\$11.99 \div 2 = \$5.995 \approx \$6.00$
Zagorin pays $6.00.

22. $\$11.90 \div 4 = \$2.975 \approx \$2.98$
Zagorin pays $2.98.

23. $\$1.75 \div 3 \approx \$.58333 \approx \$.58$
Zagorin pays $.58.

24. $\$3.94 \div 6 \approx \$.65666 \approx \$.66$
Zagorin pays $.66.

25. $\$11.98 \div 3 \approx \$3.993 \approx \$3.99$
Zagorin pays $3.99.

26. $\$37.46 \div 5 = \$7.492 \approx \$7.49$
Zagorin pays $7.49.

27. 3.5218 to the nearest tenth is 3.5.
Locate the tenths digit and draw a line.

3.5|218

Since the digit to the right of the line is 2,
leave the tenths digit alone.

3.5218 to the nearest hundredth is 3.52.
Locate the hundredths digit and draw a line.

3.52|18

Since the digit to the right of the line is 1,
leave the hundredths digit alone.

3.5218 to the nearest thousandth is 3.522.
Locate the hundredths digit and draw a line.

3.512|8

Since the digit to the right of the line is 8,
increase the thousandths digit by 1.

28. 4.836 to the nearest tenth is 4.8.
Locate the tenths digit and draw a line.

4.8|36

Since the digit to the right of the line is 3,
leave the tenths digit alone.

4.836 to the nearest hundredth is 4.84.
Locate the hundredths digit and draw a line.

4.83|6

Since the digit to the right of the line is 6,
increase the hundredths digit by 1.

4.836 to the nearest thousandth is 4.836.
Locate the hundredths digit and draw a line.

4.836|0

Since the digit to the right of the line is 0,
leave the thousandths digit alone.

29. 2.54836 to the nearest tenth is 2.5.
Locate the tenths digit and draw a line.

2.5|4836

Since the digit to the right of the line is 4,
leave the tenths digit alone.

2.54836 to the nearest hundredth is 2.55.
Locate the hundredths digit and draw a line.

2.54|836

Since the digit to the right of the line is 8,
increase the hundredths digit by 1.

2.54836 to the nearest thousandth is 2.548.
Locate the thousandths digit and draw a line.

2.548|36

Since the digit to the right of the line is 3,
leave the thousandths digit alone.

30. 7.44652 to the nearest tenth is 7.4.
Locate the tenths digit and draw a line.

7.4|4652

Since the digit to the right of the line is 4,
leave the tenths digit alone.

7.44652 to the nearest hundredth is 7.45.
Locate the hundredths digit and draw a line.

7.44|652

Since the digit to the right of the line is 6,
increase the hundredths digit by 1.

7.44652 to the nearest thousandth is 7.447.
Locate the thousandths digit and draw a line.

7.446|52

Since the digit to the right of the line is 5,
increase the thousandths digit by 1.

31. 27.32451 to the nearest tenth is 27.3.
Locate the tenths digit and draw a line.

27.3|2451

Since the digit to the right of the line is 2,
leave the tenths digit alone.

27.32451 to the nearest hundredth is 27.32.
Locate the hundredths digit and draw a line.

27.32|451

Since the digit to the right of the line is 4,
leave the hundredths digit alone.

27.32451 to the nearest thousandth is 27.325.
Locate the thousandths digit and draw a line.

27.324|51

Since the digit to the right of the line is 5,
increase the thousandths digit by 1.

32. 89.53796 to the nearest tenth is 89.5.
Locate the tenths digit and draw a line.

89.5|3796

Since the digit to the right of the line is 3,
leave the tenths digit alone.

89.53796 to the nearest hundredth is 89.54.
Locate the hundredths digit and draw a line.

89.53|796

Since the digit to the right of the line is 7,
increase the hundredths digit by 1.

89.53796 to the nearest thousandth is 89.538.
Locate the thousandths digit and draw a line.

89.537|96

Since the digit to the right of the line is 9,
increase the thousandths digit by 1.

33. 36.47249 to the nearest tenth is 36.5.
Locate the tenths digit and draw a line.

36.4|7249

Since the digit to the right of the line is 7,
increase the tenths digit by 1.

36.47249 to the nearest hundredth is 36.47.
Locate the hundredths digit and draw a line.

36.47|249

Since the digit to the right of the line is 2,
leave the hundredths digit alone.

36.47249 to the nearest thousandth is 36.472.
Locate the thousandths digit and draw a line.

36.472|49

Since the digit to the right of the line is 4,
leave the thousandths digit alone.

34. 58.95651 to the nearest tenth is 59.0.
Locate the tenths digit and draw a line.

58.9|5651

Since the digit to the right of the line is 5,
increase the tenths digit by 1. 58.9 increased
by .1 is 59.0.

58.95651 to the nearest hundredth is 58.96.
Locate the hundredths digit and draw a line.

58.95|651

Since the digit to the right of the line is 6,
increase the hundredths digit by 1.

58.95651 to the nearest thousandth is 58.957.
Locate the thousandths digit and draw a line.

58.956|51

Since the digit to the right of the line is 5,
increase the thousandths digit by 1.

35. .0562 to the nearest tenth is .1.
Locate the tenths digit and draw a line.

.0|562

Since the digit to the right of the line is 5,
increase the tenths digit by 1.

.0562 to the nearest hundredth is .06.
Locate the hundredths digit and draw a line.

.05|62

Since the digit to the right of the line is 6,
increase the hundredths digit by 1.

.0562 to the nearest thousandth is .056.
Locate the thousandths digit and draw a line.

.056|2

Since the digit to the right of the line is 2,
leave the thousandths digit alone.

36. .0789 to the nearest tenth is .1.
Locate the tenths digit and draw a line.

.0|789

Since the digit to the right of the line is 7,
increase the tenths digit by 1.

.0789 to the nearest hundredth is .08.
Locate the hundredths digit and draw a line.

.07|89

Since the digit to the right of the line is 8,
increase the hundredths digit by 1.

.0789 to the nearest thousandth is .079.
Locate the thousandths digit and draw a line.

.078|9

Since the digit to the right of the line is 9,
increase the thousandths digit by 1.

37. $5.056 \approx \$5.06$
Locate the digit representing the cent and
draw a vertical line.

$5.05|6

Since the digit to the right of the line is 6,
increase the cent digit by 1.

38. $16.519 \approx \$16.52$
Locate the digit representing the cent and
draw a vertical line.

$16.51|9

Since the digit to the right of the line is 9,
increase the cent digit by 1.

39. $32.493 \approx \$32.49$
Locate the digit representing the cent and
draw a vertical line.

$32.49|3

Since the digit to the right of the line is 3,
leave the cent digit alone.

40. $375.003 \approx \$375.00$
Locate the digit representing the cent and
draw a vertical line.

$375.00|3

Since the digit to the right of the line is 3,
leave the cent digit alone.

41. $382.005 \approx \$382.01$
Locate the digit representing the cent and
draw a vertical line.

$382.00|5

Since the digit to the right of the line is 5,
increase the cent digit by 1.

42. $12,802.965 \approx \$12,802.97$
Locate the digit representing the cent and draw a vertical line.
$$\$12,802.96|5$$
Since the digit to the right of the line is 5, increase the cent digit by 1.

43. $42.137 \approx \$42.14$
Locate the digit representing the cent and draw a vertical line.
$$\$42.13|7$$
Since the digit to the right of the line is 7, increase the cent digit by 1.

44. $.846 \approx \$.85$
Locate the digit representing the cent and draw a vertical line.
$$\$.84|6$$
Since the digit to the right of the line is 6, increase the cent digit by 1.

45. $.0015 \approx \$.00$
Locate the digit representing the cent and draw a vertical line.
$$\$.00|15$$
Since the digit to the right of the line is 1, leave the cent digit alone.

46. $.008 \approx \$.01$
Locate the digit representing the cent and draw a vertical line.
$$\$.00|8$$
Since the digit to the right of the line is 8, increase the cent digit by 1.

47. $1.5002 \approx \$1.50$
Locate the digit representing the cent and draw a vertical line.
$$\$1.50|02$$
Since the digit to the right of the line is 0, leave the cent digit alone.

48. $7.6009 \approx \$7.60$
Locate the digit representing the cent and draw a vertical line.
$$\$7.60|09$$
Since the digit to the right of the line is 0, leave the cent digit alone.

49. $1.995 \approx \$2.00$
Locate the digit representing the cent and draw a vertical line.
$$\$1.99|5$$
Since the digit to the right of the line is 5, increase the cent digit by 1.

50. $28.994 \approx \$28.99$
Locate the digit representing the cent and draw a vertical line.
$$\$28.99|4$$
Since the digit to the right of the line is 4, leave the cent digit alone.

51. $752.798 \approx \$752.80$
Locate the digit representing the cent and draw a vertical line.
$$\$752.79|8$$
Since the digit to the right of the line is 8, increase the cent digit by 1.

52. $8.58 \approx \$9$
Locate the digit representing the dollar and draw a vertical line.
$$\$8.|58$$
Since the digit to the right of the line is 5, increase the dollar digit by 1.

53. $26.49 \approx \$26$
Locate the digit representing the dollar and draw a vertical line.
$$\$26.|49$$
Since the digit to the right of the line is 4, leave the dollar digit alone.

54. $.57 \approx \$1$
Locate the digit representing the dollar and draw a vertical line.
$$\$.|57$$
Since the digit to the right of the line is 5, increase the dollar digit by 1.

55. $.49 \approx \$0$
Locate the digit representing the dollar and draw a vertical line.
$$\$.|49$$
Since the digit to the right of the line is 4, leave the dollar digit alone.

56. $299.76 ≈ $300
Locate the digit representing the dollar and draw a vertical line.
$299.|76
Since the digit to the right of the line is 7, increase the dollar digit by 1. $299 increased by 1 is $300.

57. $12,836.38 ≈ $12,836
Locate the digit representing the dollar and draw a vertical line.
$12,836.|38
Since the digit to the right of the line is 3, leave the dollar digit alone.

58. $268.72 ≈ $269
Locate the digit representing the dollar and draw a vertical line.
$268.|72
Since the digit to the right of the line is 7, increase the dollar digit by 1.

59. $395.18 ≈ $395
Locate the digit representing the dollar and draw a vertical line.
$395.|18
Since the digit to the right of the line is 1, leave the dollar digit alone.

60. $666.66 ≈ $667
Locate the digit representing the dollar and draw a vertical line.
$666.|66
Since the digit to the right of the line is 6, increase the dollar digit by 1.

61. $4699.62 ≈ $4700
Locate the digit representing the dollar and draw a vertical line.
$4699.|62
Since the digit to the right of the line is 6, increase the dollar digit by 1. $4699 increased by 1 is $4700.

62. $11,285.13 ≈ $11,285
Locate the digit representing the dollar and draw a vertical line.
$11,285.|13
Since the digit to the right of the line is 1, leave the dollar digit alone.

63. $378.59 ≈ $379
Locate the digit representing the dollar and draw a vertical line.
$378.|59
Since the digit to the right of the line is 5, increase the dollar digit by 1.

64. $233.86 ≈ $234
Locate the digit representing the dollar and draw a vertical line.
$233.|86
Since the digit to the right of the line is 8, increase the dollar digit by 1.

65. $722.38 ≈ $722
Locate the digit representing the dollar and draw a vertical line.
$722.|38
Since the digit to the right of the line is 3, leave the dollar digit alone.

66. $8263.47 ≈ $8263
Locate the digit representing the dollar and draw a vertical line.
$8263.|47
Since the digit to the right of the line is 3, leave the dollar digit alone.

67. Answers will vary.

68. Answers will vary.

1.4   Addition and Subtraction of Decimals

1.

Estimate		Exact
40	⟵	43.36
20	⟵	15.8
+ 9	⟵	+ 9.3
69		68.46

2.

Estimate		Exact
600	⟵	623.15
700	⟵	734.29
+ 700	⟵	+ 686.26
2000		2043.70

3. Estimate   Exact

6	←——	6.23
4	←——	3.6
5	←——	5.1
7	←——	7.2
+ 2	←——	+ 1.69
24		23.82

4. Estimate   Exact

10	←——	12.79
2	←——	2.15
20	←——	16.28
4	←——	4.39
+ 8	←——	+ 7.61
44		43.22

5. Estimate   Exact

2000	←——	2156.38
5	←——	5.26
3	←——	2.791
+ 7	←——	+ 6.983
2015		2171.414

6. Estimate   Exact

2000	←——	1889.76
20	←——	21.42
20	←——	19.35
+ 8	←——	+ 8.1
2048		1938.63

7. Estimate   Exact

6000	←——	6133.78
500	←——	506.124
20	←——	18.63
+ 8	←——	+ 7.527
6528		6666.061

8. Estimate   Exact

700	←——	743.1
4000	←——	3817.65
3	←——	2.908
4000	←——	4123.76
+ 20	←——	+ 21.98
8723		8709.398

9. Estimate   Exact

2000	←——	1798.419
70	←——	68.32
500	←——	512.807
600	←——	643.9
+ 400	←——	+ 428.
3570		3451.446

10.
```
   45.631
   15.8
    7.234
+  19.63
   88.295
```

11.
```
   12.15
    6.83
   61.75
   19.218
+  73.325
  173.273
```

12.
```
  197.4
   83.72
   17.43
   25.63
+   1.4
  325.58
```

13.
```
   27.653
   18.7142
    9.7496
+   3.21
   59.3268
```

14.
```
   73.618
   19.18
  371.82
+355.125
  819.743
```

15. Answers will vary.

16. Answers will vary.

17. $1815.79 + $2367.34 + $1976.22
+$2155.81 + $1698.14 + 2885.26
+$2239.63 = $15,138.19
The total weekly sales are $15,138.19.

18. $85.25 + $114.60 + $129.40 = $329.25
The total is $329.25.

19. $6.71 − $1.39 = $5.32
The price of T-bone steak is $5.32 per pound more than turkey.

20. $1530 − $1238.73 = $291.27
Tuxon is paying $291.27 above the average.

21. Estimate   Problem

20	←——	19.74
− 7	←——	− 6.58
13		13.16

22. Estimate   Pr oblem

$$\begin{array}{r} 40 \\ -8 \\ \hline 32 \end{array} \longleftarrow \begin{array}{r} 35.86 \\ -7.91 \\ \hline 27.95 \end{array}$$

23. Estimate   Pr oblem

$$\begin{array}{r} 50 \\ -20 \\ \hline 30 \end{array} \longleftarrow \begin{array}{r} 51.215 \\ -19.708 \\ \hline 31.507 \end{array}$$

24. Estimate   Pr oblem

$$\begin{array}{r} 30 \\ -20 \\ \hline 10 \end{array} \longleftarrow \begin{array}{r} 27.613 \\ -18.942 \\ \hline 8.671 \end{array}$$

25. Estimate   Pr oblem

$$\begin{array}{r} 300 \\ -90 \\ \hline 210 \end{array} \longleftarrow \begin{array}{r} 325.053 \\ -85.019 \\ \hline 240.034 \end{array}$$

26. Estimate   Pr oblem

$$\begin{array}{r} 4000 \\ -900 \\ \hline 3100 \end{array} \longleftarrow \begin{array}{r} 3974.61 \\ -892.59 \\ \hline 3082.02 \end{array}$$

27. Estimate   Pr oblem

$$\begin{array}{r} 8 \\ -3 \\ \hline 5 \end{array} \longleftarrow \begin{array}{r} 7.8 \\ -2.952 \\ \hline 4.848 \end{array}$$

28. Estimate   Pr oblem

$$\begin{array}{r} 30 \\ -10 \\ \hline 20 \end{array} \longleftarrow \begin{array}{r} 27.8 \\ -13.582 \\ \hline 14.218 \end{array}$$

29. Estimate   Pr oblem

$$\begin{array}{r} 5 \\ -2 \\ \hline 3 \end{array} \longleftarrow \begin{array}{r} 5 \\ -1.9802 \\ \hline 3.0198 \end{array}$$

30. $60,375.82 + $3280.18 + $75.53
$= $63,731.53$
Fernandez deposited $63,731.53 in March.

31. $27,282.75 + $4280.83 + $12,252.23
$= $43,815.81$
Fernandez paid out $43,815.81.

32. $5382.12 + $63,731.53 − $43,815.81
$= $25,297.84$
Her final balance was $25,297.84.

1.5 Multiplication and Division of Decimals

1. Estimate   Pr oblem

$$\begin{array}{r} 100 \\ \times\ 4 \\ \hline 400 \end{array} \longleftarrow \begin{array}{r} 96.8 \\ \times\ 4.2 \\ \hline 406.56 \end{array}$$

2. Estimate   Pr oblem

$$\begin{array}{r} 20 \\ \times\ 4 \\ \hline 80 \end{array} \longleftarrow \begin{array}{r} 16.6 \\ \times\ 4.2 \\ \hline 69.72 \end{array}$$

3. Estimate   Pr oblem

$$\begin{array}{r} 30 \\ \times\ 7 \\ \hline 210 \end{array} \longleftarrow \begin{array}{r} 34.1 \\ \times\ 6.8 \\ \hline 231.88 \end{array}$$

4. Estimate   Pr oblem

$$\begin{array}{r} 70 \\ \times\ 8 \\ \hline 560 \end{array} \longleftarrow \begin{array}{r} 70.35 \\ \times\ 8.06 \\ \hline 567.021 \end{array}$$

5. Estimate   Pr oblem

$$\begin{array}{r} 40 \\ \times\ 2 \\ \hline 80 \end{array} \longleftarrow \begin{array}{r} 43.8 \\ \times\ 2.04 \\ \hline 89.352 \end{array}$$

6. Estimate   Pr oblem

$$\begin{array}{r} 70 \\ \times\ 3 \\ \hline 210 \end{array} \longleftarrow \begin{array}{r} 69.3 \\ \times\ 2.81 \\ \hline 194.733 \end{array}$$

7.
$$\begin{array}{r} .532 \\ \times\ 3.6 \\ \hline 3192 \\ 1\ 596 \\ \hline 1.9152 \end{array} \begin{array}{l} \longleftarrow \text{3 decimals} \\ \longleftarrow \text{1 decimal} \\ \\ \\ \longleftarrow \text{4 decimals} \end{array}$$

8.
$$\begin{array}{r} .259 \\ \times\ 6.2 \\ \hline 518 \\ 1\ 554 \\ \hline 1.6058 \end{array} \begin{array}{l} \longleftarrow \text{3 decimals} \\ \longleftarrow \text{1 decimal} \\ \\ \\ \longleftarrow \text{4 decimals} \end{array}$$

9.
$$\begin{array}{r} 21.7 \\ \times\ .431 \\ \hline 217 \\ 651 \\ 8\ 68 \\ \hline 9.3527 \end{array} \begin{array}{l} \longleftarrow \text{1 decimal} \\ \longleftarrow \text{3 decimals} \\ \\ \\ \\ \longleftarrow \text{4 decimals} \end{array}$$

10.
```
        76.9 ⟵——  1 decimal
     ×  .903 ⟵——  3 decimals
      2307
         0
    69 21
    69.4407 ⟵——   4 decimals
```

11.
```
      .0408 ⟵——   4 decimal
    ×   .06 ⟵——    2 decimals
      2448
         0
    .002448 ⟵——   6 decimals
```

12.
```
     2481.9 ⟵——   1 decimal
    ×  .003 ⟵——    3 decimals
     74457
         0
         0
     7.4457 ⟵——    4 decimals
```

13. $18.5 \times \$8.25 = \$152.63$

14. $36.6 \times \$9.85 = \$360.51$

15.
```
    27.9×$11.42 = $318.62
    6.8×$14.63 =  $99.48
                 $418.10
```

16.
```
    11.4×$8.59 =  $97.93
    23.9×$10.06 = $240.43
                  $338.36
```

17.
```
         8.075
     6)48.450
       48
       04
        0
       45
       42
        30
        30
         0
```

18.
```
          12.476
     5)62.380
       5
       12
       10
        23
        20
        38
        35
         30
         30
          0
```

19.
```
         27.442
    15)411.630
       30
       111
       105
         66
         60
          63
          60
           30
           30
            0
```

20.
```
    2.43)9.6153          243)961.5300
                            729
    = 3.957 (rounded)       2325
                            2187
                             1383
                             1215
                             1680
                             1458
                              2220
                              2187
                                33
```
(quotient: 3.9569)

21.
```
    .65)37.6852          65)3768.5200
                            325
    = 57.977 (rounded)      518
                            455
                             635
                             585
                              502
                              455
                               470
                               455
                                150
                                130
                                 20
```
(quotient: 57.9772)

22. $.28\overline{)15.62}$

$= 55.786$ (rounded)

$$
\begin{array}{r}
55.7857 \\
28\overline{)1562.0000} \\
\underline{140} \\
162 \\
\underline{140} \\
220 \\
\underline{196} \\
240 \\
\underline{224} \\
160 \\
\underline{140} \\
200 \\
\underline{196} \\
4
\end{array}
$$

23. Answers will vary.

24. Answers will vary.

25. $\$246,500 \times .06 = \$14,790$
The amount of the commission was $14,790.

26. $2.75 \times 4 = 11$
Janitha needs 11 yards of material.

27. $519 \div 10.2 = 50.9$
The Prius got 50.9 miles per gallon.

28. (a) $48 \times 4.3 = 206.4$
206.4 hours are worked each month.

(b) $\$2528 \div 206.4 = \$12.25$
The assistant manager's hourly earnings are $12.25.

29. $\$2872.26 \div \$106.38 = 27$
It will take 27 months to pay off the balance.

30. $57.13 \div 1.62 \approx 35$
35 doses can be made.

31. (a) $.0043 \times 100 = .43$
The pile of one hundred $100 bills would be .43 inch high.

(b) $.0043 \times 1000 = 4.3$
The pile of one thousand $100 bills would be 4.3 inches high.

32. (a) $43 \div .0043 = 10,000$
There are 10,000 bills.

(b) $10,000 \times \$20 = \$200,000$
You would have $200,000.

33. A total of $4 + 2 = 6$ shirts were ordered.

$4 \times \$18.95 = \$75.80$
$2 \times \$16.75 = \$33.50$
$6 \times \$2 = \$12$

$\$75.80 + \$33.50 + \$12 = \$121.30$ total price

Total price + shipping
$= \$121.30 + \$7.95 = \$129.25$
The total cost is $129.95.

34. $5 \times \$18.95 = \$94.75$
$3 \times \$21.95 = \$65.85$

$\$94.75 + \$65.85 = \$160.60$ total price

Total price + shipping
$= \$160.60 + \$9.95 + \$4.25 = \$174.80$
The total cost is $174.80.

35. (a) Add to find the total for the shirts, monogram, and gift box.
$3 \times \$14.75 = \$44.25$

$\$44.25 + \$4.95 + \$4.95 + \$4.95 + \$5$
$= \$64.10$

Total price + shipping
$= \$64.10 + \$5.95 = \$70.05$
The total cost is $70.05.

(b) Monogram + gift box + shipping
$= \$4.95 + \$4.95 + \$4.95 + \$5 + \$5.95$
$= \$25.80$
The monogram, gift box, and shipping added $25.80 to the cost.

36. (a) Add to find the total for your shirts, with monogram on the solid-color shirts.
$\$14.75 + \$16.75 + \$18.95 + \$21.95$
$+\$4.95 + \$4.95 = \$82.30$

Add to find the total for your father's size-XXL shirts, in a gift box.
$3 \times \$21.95 = \$65.85$
$\$65.85 + \$2 + \$2 + \$2 + \$5 = \$76.85$

Total price
$= \$82.30 + \$76.85 = \$159.15$

Total price + shipping
$= \$159.15 + \$9.95 + \$4.25 = \$173.35$
The total cost is $173.35.

(b) $\$82.30 - \$76.85 = \$5.45$
The difference in total cost is $5.45.

Case Study

1. $10,664 + $3821 + $3053 + $2958
   $= $20,496$
   The combined cost is $20,496.

2. $28,540 − $24,168 = $4372
   The difference in the average costs is
   $4372.

3. $7500 ÷ $42 ≈ 178
   You can invite 178 guests.

   $42 × 178 = $7476

   $7500 − $7476 = $24
   The amount remaining is $24.

4. $5325 ÷ 115 ≈ $46.304 ≈ $46.30
   $46.30 can be spent per person.

5. $22,000 − $8000 = $14,000

   $14,000 ÷ $650 ≈ 21.538 ≈ 22

   It will require 22 months for the couple to
   pay their share of the costs.

Case in Point Summary Exercise

1. $486.12 + $1236.14 + $364.76 + $103.75
   $= 2190.77
   The total of the invoice is $2190.77.

2. $3.5 + 4.5 + 6 + $5.5 = 19.5
   The total number of hours worked is 19.5.

   $19.5 × $8.65 = $168.68
   The pay for the week is $168.68.

3. $2065.48 − $1864.92 = $200.56
   The difference between the two is $200.56.

   $200.56 ÷ $.94 ≈ 213
   There are approximately 213 additional
   customers.

4. $168.32 × 4 = $673.28
   The amount spent on advertising is $673.28.

   $10,984.76 × 1.3 = $14,280.19
   The revenue is approximately $14,280.19.

Chapter 1 Test

1. 844 to the nearest ten is 840.
   Draw a line under the tens digit.
   84̲4
   Since the digit to the right of that place is 4,
   do not change the tens digit. Change all
   digits to the right of the tens place to zero.

2. 21,958 to the nearest hundred is 22,000.
   Draw a line under the hundreds digit.
   21,9̲58
   Since the digit to the right of that place is 5,
   increase the hundreds digit by 1, which
   increases the thousands digit by 1. Change all
   digits to the right of the thousands place to
   zero.

3. 671,529 to the nearest thousand is 672,000.
   Draw a line under the thousands digit.
   671̲,529
   Since the digit to the right of that place is 5,
   increase the thousands digit by 1. Change all
   digits to the right of the thousands place to
   zero.

4. 50,987 ≈ 50,000
   Round the first digit and change all other
   digits to zero.

5. 851,004 ≈ 900,000
   Round the first digit and change all other
   digits to zero.

6. $124 + $88 + $62 + $137 + $195 = $606
   Katie's total amount of commissions is $606.

7. $(3 × $1540) + (5 × $695) + (8 × $38)$
   $= $4620 + $3475 + $304 = 8399
   The total cost of the equipment is $8399.

8. $21.0568 ≈ $21.06
   Locate the digit representing the cent and
   draw a vertical line.
   $21.05|68
   Since the digit to the right of the line is 6,
   increase the cent digit by 1.

9. $364.345 ≈ $364.35
   Locate the digit representing the cent and
   draw a vertical line.
   $364.34|5
   Since the digit to the right of the line is 5,
   increase the cent digit by 1.

10. $\$7246.49 \approx \$7246$

Locate the digit representing the dollar and draw a vertical line.

$$\$7246.|49$$

Since the digit to the right of the line is 4, leave the dollar digit alone.

11. $9.6 + 8.42 + 3.715 + 159.8 = 181.535$

12.
$$\begin{array}{r} 2.715 \\ 32.78 \\ 426.3 \\ +\ 37 \\ \hline 498.795 \end{array}$$

13.
$$\begin{array}{r} 341.4 \\ -\ 207.8 \\ \hline 133.6 \end{array}$$

14.
$$\begin{array}{r} 3.8 \\ -\ .0053 \\ \hline 3.7947 \end{array}$$

15.
$$\begin{array}{r} 21.98 \quad\longleftarrow\quad \text{2 decimals} \\ \times\ \ .72 \quad\longleftarrow\quad \text{2 decimals} \\ \hline 4396 \\ 15386 \\ \hline 15.8256 \quad\longleftarrow\quad \text{4 decimals} \end{array}$$

16.
$$\begin{array}{r} 218.6 \quad\longleftarrow\quad \text{1 decimal} \\ \times .037 \quad\longleftarrow\quad \text{3 decimals} \\ \hline 15302 \\ 6558 \\ \hline 8.0882 \quad\longleftarrow\quad \text{4 decimals} \end{array}$$

17. $21.8\overline{)252.008}$

$$\begin{array}{r} 11.56 \\ 218.\overline{)2520.08} \\ \underline{218} \\ 340 \\ \underline{218} \\ 1220 \\ 1090 \\ \hline 1308 \\ \underline{1308} \\ 0 \end{array}$$

18. $70\overline{)24,500}$

$$\begin{array}{r} 350 \\ 7\overline{)2450} \\ \underline{21} \\ 35 \\ \underline{35} \\ 00 \\ \underline{0} \\ 0 \end{array}$$

19. $2.41\overline{)57.358}$

$$\begin{array}{r} 23.8 \\ 241.\overline{)5735.8} \\ \underline{482} \\ 915 \\ \underline{723} \\ 192\ 8 \\ \underline{192\ 8} \\ 0 \end{array}$$

20. $(24.8 \times \$1.89) + (38.2 \times \$2.05)$
$= \$125.182 \approx \$125.18$
The final cost is $125.18.

21. $\$84.52 + \$55.75 + \$9.65 = \$149.92$
The cost per square is $149.92.

$\$149.92 \times 26.3 = \$3942.90$
The total cost is $3942.90.

22. $3.4 - 1.6 = 1.8$
1.8 gallons of water are saved per flush.

$1.8 \times 22 \times 365 = 14,454$
14,454 gallons of water are saved in one year.

23. $(135.5 \times \$.86) + (12 \times \$2.18) = \$142.69$
The total cost was $142.69.

$(8 \times \$20) - \$142.69 = \$17.31$
Steve received $17.31 change.

24. $\$1.74 \div 2.2 = \$.7909 \approx \$.79$
The price of bananas is $.79 per pound.

25. $14.674 \div .058 = 253$
253 seedlings can be fertilized.

26. $.65 \times 2 \times 7 = 9.1 \approx 9$
9 milliliters of antibiotics are needed.

27. $\$199 \times 4 = \$796$
The price of the phones is $796.

$\$796 \times .08125 = \$64.68$
Sales tax is $64.68.

$\$796 + \$64.68 = \$860.68$
The total cost of the phones is $860.68.

$\$1000 - \$860.68 = \$139.32$
The amount left over is $139.32.