Divide decimals by decimals.

**Main Idea**

When dividing by decimals, change the divisor into a whole number. To do this, multiply both the divisor and the dividend by the same power of 10. Then divide as with whole numbers.

**Example**

Find \(14.19 \div 2.2\).

**Estimate** \(14 \div 2 = 7\)

Multiply by 10 to make a whole number.

\[
\begin{array}{c}
2.2 \overline{)14.19} \\
\underline{13.2}\hspace{2cm}6.45 \\
\end{array}
\]

Place the decimal point. Divide as with whole numbers.

\[
\begin{array}{c}
22 \overline{)141.90} \\
\underline{133}\hspace{2cm}8.8 \hspace{2cm}110 \\
\underline{110}\hspace{2cm}0 \\
\end{array}
\]

Annex a zero to continue.

\(14.19 \div 2.2 = 6.45\) Compare to the estimate.

**Check** \(6.45 \times 2.2 = 14.19\)

Divide.

\(\begin{array}{ccc}
a. 54.4 \div 1.7 & b. 8.424 \div 0.36 & c. 0.0063 \div 0.007 \\
\end{array}\)
Zeros in the Quotient and Dividend

2. Find \(52 \div 0.4\).

\[
\begin{array}{c|c}
0.4 & 52.0 \\
\hline
4 & 520. \\
\hline
4 & 4 \quad 12 \quad 0
\end{array}
\]

Multiply each by 10.

So, \(52 \div 0.4 = 130\).

Check \(130 \times 0.4 = 52\).

Place the decimal point.

3. Find \(0.09 \div 1.8\).

\[
\begin{array}{c|c}
1.8 & 0.09 \\
\hline
18 & 0.90 \\
\hline
18 & 0 \quad 09 \quad 00 \quad 90 \quad 0
\end{array}
\]

Multiply each by 10.

Place the decimal point. 18 does not go into 9, so write a 0 in the tenths place.

Annex a 0 in the dividend and continue to divide.

So, \(0.09 \div 1.8 = 0.05\).

Check \(0.05 \times 1.8 = 0.09\).

Check Your Progress: Divide.

d. \(5.6 \div 0.014\)  
e. \(62.4 \div 0.002\)  
f. \(0.4 \div 0.0025\)

Round Quotients

4. INTERNET How many times more Internet users are there in Japan than in Spain? Round to the nearest tenth.

Find \(86.3 \div 19.8\).

\[
\begin{array}{c|c}
19.8 & 86.3 \\
\hline
198 & 863. \\
\hline
198 & 792 \\
\hline
710 & 594 \\
\hline
1,160 & 170 \\
\hline

To the nearest tenth, \(86.3 \div 19.8 = 4.4\). So, there are about 4.4 times more Internet users in Japan than in Spain.

Check Your Progress:

g. INTERNET How many times more Internet users are there in the U.S. than in France? Round to the nearest tenth.
Divide.

Example 1  (p. 179)
1. 3.69 ÷ 0.3  
2. 9.92 ÷ 0.8  
3. 0.45 ÷ 0.3  
4. 13.95 ÷ 3.1  

Examples 2, 3  (p. 180)
5. 0.6 ÷ 0.0024  
6. 0.462 ÷ 0.06  
7. 0.321 ÷ 0.4  
8. 2.943 ÷ 2.7  

Example 4  (p. 180)
9. MEASUREMENT Alicia bought 5.75 yards of fleece fabric to make blankets for a charity. She needs 1.85 yards of fabric for each blanket. How many blankets can Alicia make with the fabric she bought?

Divide.

10. 1.44 ÷ 0.4  
11. 0.68 ÷ 3.4  
12. 16.24 ÷ 0.14  
13. 2.07 ÷ 0.9  
14. 0.0338 ÷ 1.3  
15. 0.16728 ÷ 3.4  
16. 96.6 ÷ 0.42  
17. 1.08 ÷ 2.7  
18. 13.5 ÷ 0.03  
19. 8.4 ÷ 0.02  
20. 0.12 ÷ 0.15  
21. 0.242 ÷ 0.4

22. MEASUREMENT A submarine sandwich 1.5 feet long is cut into 0.25-foot pieces. How many pieces will there be?

23. MEASUREMENT The average person’s stride length, the distance covered by one step, is approximately 2.5 feet long. How many steps would the average person take to travel 50 feet?

24. POPULATION The table shows the five most populated countries in the world. How many times more people live in China than in the United States? Round to the nearest tenth if necessary.

<table>
<thead>
<tr>
<th>Country</th>
<th>Approximate Population (billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>1.322</td>
</tr>
<tr>
<td>India</td>
<td>1.13</td>
</tr>
<tr>
<td>United States</td>
<td>0.301</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.235</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.19</td>
</tr>
</tbody>
</table>

Source: Central Intelligence Agency

25. GEOGRAPHY Alaska has the longest coastline in the United States, at about 6.64 thousand miles. Florida has about 1.35 thousand miles of coastline. How many times more coastline does Alaska have than Florida? Round to the nearest tenth if necessary.

26. MEASUREMENT Lake Superior, along the U.S.-Canadian border, has a maximum depth of 1.333 thousand feet. There are 5,280 feet in one mile. How deep is Lake Superior in miles? Round to the nearest hundredth if necessary.

Real-World Link.

The population of China is about 20% of the world’s total population. So, one in every five people on Earth is a resident of China.
ALGEBRA Use the order of operations to evaluate each expression if \( m = 88.2, n = 3, \) and \( p = 17.5. \) Round to the nearest tenth if necessary.

27. \( \frac{m}{n} \)
28. \( \frac{mp}{n} \)
29. \( \frac{mn}{p} \)
30. \( \frac{m}{p} \)
31. \( \frac{p}{n} \)
32. \( \frac{m - p}{n} \)
33. \( \frac{p + n}{n} \)
34. \( \frac{m + n + p}{p} \)

CARS For Exercises 35 and 36, use the table that shows the most popular sports car colors in a recent year in North America.

35. How many times more respondents chose silver than red? Round to the nearest tenth if necessary.

36. How many times more respondents chose either silver or black than red? Round to the nearest tenth if necessary.

37. MEASUREMENT The longest vehicle tunnel in the world is the Laerdal Tunnel in Norway with a length of 15.2 miles. How many vehicles could fit in the tunnel bumper to bumper if the average vehicle length is 0.004 mile?

38. FIND THE DATA Refer to the Data File on pages 16–19. Choose some data and write a real-world problem in which you would divide decimals.

Most Popular Sports Car Colors

<table>
<thead>
<tr>
<th>Color</th>
<th>Portion of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>0.2</td>
</tr>
<tr>
<td>Gray</td>
<td>0.17</td>
</tr>
<tr>
<td>Blue</td>
<td>0.16</td>
</tr>
<tr>
<td>Black</td>
<td>0.14</td>
</tr>
<tr>
<td>White</td>
<td>0.1</td>
</tr>
<tr>
<td>Red</td>
<td>0.09</td>
</tr>
<tr>
<td>Green</td>
<td>0.06</td>
</tr>
<tr>
<td>Other</td>
<td>0.08</td>
</tr>
</tbody>
</table>

H.O.T. Problems

39. CHALLENGE Find two positive decimals \( a \) and \( b \) that make the following statement true. Then find two positive decimals \( a \) and \( b \) that make the statement false.

\[ \text{If } a < 1 \text{ and } b < 1, \text{ then } a \div b < 1. \]

40. OPEN ENDED Write a division problem with decimals in which it is necessary to annex one or more zeros to the dividend. Then solve the problem. Round to the nearest tenth if necessary.

41. NUMBER SENSE Use the number line below to determine if the quotient of \( 1.92 \div 0.5 \) is closest to 2, 3, or 4. Do not calculate. Explain your reasoning.

![Number Line]

42. Which One Doesn’t Belong? Identify the problem that does not have the same quotient as the other three. Explain your reasoning.

\[ 49 \div 7 \quad 4.9 \div 7 \quad 0.49 \div 0.7 \quad 0.049 \div 0.07 \]

43. WRITING IN MATH Refer to the table in Exercise 24 on the world’s most populated countries. Write and solve a problem in which you would divide decimals. Include instructions for rounding in your problem.
44. To the nearest tenth, how many times more people in the U.S. own dogs than own birds?

45. The table shows the approximate number of people in the world who speak either Spanish or French.

<table>
<thead>
<tr>
<th>Language</th>
<th>Speakers (billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>0.425</td>
</tr>
<tr>
<td>French</td>
<td>0.129</td>
</tr>
</tbody>
</table>

To the nearest tenth, how many times more people speak Spanish than French?
- F 0.054 billion
- G 0.296 billion
- H 0.304 billion
- J 3.295 billion

46. Find the quotient when 68.52 is divided by 12. (Lesson 3-8)

47. 19.2 \times 2.45

48. 8.25 \times 12.42

49. 9.016 \times 51.9

46. Find the quotient when 68.52 is divided by 12. (Lesson 3-8)

Multiply. (Lesson 3-7)

47. 19.2 \times 2.45

48. 8.25 \times 12.42

49. 9.016 \times 51.9

Write an integer to represent each piece of data. (Lesson 2-9)

50. Miguel deposited $45 into his savings account.

51. Mrs. Bezant descended four flights of stairs.

52. The football team gained 16 yards.

53. Suki set her watch back by one hour.

54. GEOGRAPHY The four largest islands in the world are shown in the table. Find the mean and median number of square miles for these data. (Lesson 2-7)

55. PREREQUISITE SKILL A number is multiplied by 8. Next, 4 is subtracted from the product. Then, 12 is added to the difference. If the result is 32, what is the number? Use the guess and check strategy. (Lesson 1-7)
Mixed Problem Solving

Determine reasonable answers for Exercises 3–5.

3. **CLOTHES** Annie wants to buy 2 pairs of capris for $34.99 each and 3 pairs of flip-flops for $7.99 each. Does she need to save $150, or is $100 enough?

4. **DONATIONS** Mario collected donations for the American Red Cross. He kept a record of the donations.

<table>
<thead>
<tr>
<th>Day</th>
<th>Donations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>$92.33</td>
</tr>
<tr>
<td>Tuesday</td>
<td>$107.08</td>
</tr>
<tr>
<td>Wednesday</td>
<td>$75.98</td>
</tr>
<tr>
<td>Thursday</td>
<td>$63.01</td>
</tr>
<tr>
<td>Friday</td>
<td>$111.64</td>
</tr>
</tbody>
</table>

Which is a more reasonable estimate for the amount of money Mario will collect next week if he doubles this week's donations: $700 or $800?

5. **PLAYGROUND** The length of a playground is 88.5 yards. Which is a more reasonable estimate for the length of the playground in feet: 240 or 270?

Use any strategy to solve Exercises 6–12. Some strategies are shown below.

- Make a table.
- Guess and check.

6. **CONCERT** In how many ways can 4 people stand in line at a concert if Terrez and Missy must stand next to each other?

7. **SHOPPING** An online store sells personalized magnets for $3.25 each and personalized keychains for $5.79 each. If Mrs. Anderson spent $56.78 on magnets and keychains, how many of each did she buy?

For Exercises 8 and 9, use the table below that shows the number of CD singles that were shipped for sale from 2001 to 2005.

<table>
<thead>
<tr>
<th>Year</th>
<th>CD Singles Shipped (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>17.3</td>
</tr>
<tr>
<td>2002</td>
<td>4.5</td>
</tr>
<tr>
<td>2003</td>
<td>8.3</td>
</tr>
<tr>
<td>2004</td>
<td>3.1</td>
</tr>
<tr>
<td>2005</td>
<td>2.8</td>
</tr>
</tbody>
</table>

8. Which year had about 3 times as many CD singles as in 2005?

9. Which year had about 5 million less CDs shipped than 2003?

10. **CHICKENS** The most eggs a chicken has ever laid in one day is 7. At this rate, how many eggs will a chicken lay in 8 years?

11. **NUMBERS** John wrote down two numbers. The product of the numbers is 48 and the difference between the two numbers is 8. What are the two numbers John wrote down?

12. **WAHLES** The table below shows the weight of whales. Is the weight of a blue whale about 3 times, 4 times, or 5 times more than the weight of a gray whale?

<table>
<thead>
<tr>
<th>Whale</th>
<th>Weight (tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>151.0</td>
</tr>
<tr>
<td>Bowhead</td>
<td>95.0</td>
</tr>
<tr>
<td>Fin</td>
<td>69.9</td>
</tr>
<tr>
<td>Gray</td>
<td>38.5</td>
</tr>
<tr>
<td>Humpback</td>
<td>38.1</td>
</tr>
</tbody>
</table>

Source: Top 10 of Everything
Lesson-by-Lesson Review

3-1 Representing Decimals (pp. 138–141)

Write each decimal in standard form and in expanded form.

6.N.21

11. thirteen hundredths
12. six and five tenths
13. eighty-three and five thousandths
14. NATURE The largest sunflower head ever grown was eighty-one and twenty-eight hundredths centimeters across. Write this length in standard form.

Example 1 Write 21.62 in word form.
21.62 is twenty-one and sixty-two hundredths.

Example 2 Write three hundred forty-six thousandths in standard form and in expanded form.
Standard form: 0.346
Expanded form: \((3 \times 0.1) + (4 \times 0.01) + (6 \times 0.001)\)

3-2 Comparing and Ordering Decimals (pp. 142–145)

Use >, <, or = to compare each pair of decimals.

6.N.14, 6.N.15

15. 0.35 0.3
16. 6.024 6.204
17. 0.10 0.1
18. 8.34 9.3

Order each set of decimals from least to greatest.

19. 9.501, 0.9051, 90.51, 0.0951
20. 7.403, 0.0743, 7.743, 74.43
21. MONEY The costs of four items are $9, $0.99, $9.99, and $19.99. Order these costs from least to greatest.

Example 3 Order 17.89, 0.17, 1.879, 10.789 from least to greatest.

17.89 \(\rightarrow\) 17.890
0.17 \(\rightarrow\) 0.170
1.879 \(\rightarrow\) 1.879
10.789 \(\rightarrow\) 10.789

Line up the decimal points and annex zeros so that each has the same number of decimal places.

Use place value to compare the decimals. The order from least to greatest is 0.17, 1.879, 10.789, and 17.89.

3-3 Rounding Decimals (pp. 146–149)

Round each decimal to the indicated place-value position.

6.N.27, 6.CN.3

22. 5.031; hundredths
23. 0.00042; ten-thousandths
24. 2.29; tenths
25. AREA The area of Hamilton County is 50.4 square miles. Round 50.4 to the nearest square mile.

Example 4 Round 8.0314 to the hundredths place.

8.0314 Underline the digit to be rounded.
8.0314 Then look at the digit to the right. Since 1 is less than 5, the digit 3 stays the same.

So, 8.0314 rounds to 8.03.
Estimating Sums and Differences  (pp. 150–154)

Estimate using rounding.
26. 37.82 + 14.24  27. $72.18 - $29.93
28. 6.8 + 4.2 + 3.5  29. 129.6 - 9.7

Estimate using clustering.
30. 12.045 + 11.81 + 12.3 + 11.56
31. $6.45 + $5.88 + $5.61 + $6.03

Estimate using front-end estimation.
32. 31.29  33. 93.65
+ 58.07  - 62.13
34. 145.91  35. 87.25
+ 131.65  - 63.97

SHOPPING Jodie buys a sweater for $24.35, a bracelet for $17.62, and a pair of earrings for $11.19. If she uses front-end estimation to estimate the sum of her purchases, about how much does she spend?

Example 5 Estimate 38.61 - 14.25 using rounding.
38.61 → 39  - 14.25 → -14
Round to the nearest whole number.

Example 6 Estimate 8.12 + 7.65 + 8.31 + 8.08 using clustering.
All addends of the sum are close to 8. So, an estimate is 4 × 8 or 32.

Example 7 Estimate 24.6 + 35.1 using front-end estimation.
24.6 + 35.1 Add the front digits to get 5.
An estimate is 50.

Adding and Subtracting Decimals  (pp. 156–160)

Find each sum or difference.
37. 18.35 + 23.61  38. 148.93 - 121.36
39. 1.325 + 0.081
40. 248 - 131.28

RELAY The times for each leg of a 4 × 100-meter relay are 14.75, 14.49, 14.56, and 14.32 seconds. What was the total time of the relay team?

MONEY Coral has $40 to buy a backpack. If the backpack costs $35.99, how much money will she have left?

Example 8 Find the sum of 48.23 and 11.65.
Estimate 48.23 + 11.65 = 48 + 12 = 60
Line up the decimals.
48.23 + 11.65
Add as with whole numbers.
59.88
The sum is 59.88.
Check for Reasonableness 59.88 ≈ 60 ✔

Example 9 Find the difference between 57.68 and 34.64.
Estimate 58 - 35 ≈ 23
Line up the decimals.
57.68 - 34.64
Subtract as with whole numbers.
23.04
The difference is 23.04.
Check for Reasonableness 23.04 ≈ 23 ✔
## Multiplying Decimals by Whole Numbers (pp. 163–166)

### Example 10 Find 6.45 × 7.

**Estimate** 6.45 × 7 → 6 × 7 or 42

\[
\begin{array}{c}
33 \\
6.45 \\
\times 7 \\
\hline
45.15
\end{array}
\]

**Mixed Problem Solving**

For mixed problem-solving practice, see page 708.

### Multiplying Decimals (pp. 169–172)

### Example 11 Find 38.76 × 4.2.

\[
\begin{array}{c}
38.76 \\
\times 4.2 \\
\hline
7752 \\
\hline
162.792
\end{array}
\]

51. **GROCERIES** A loaf of bread costs $1.79. How much would five loaves of bread cost?

52. **ANIMALS** The average hamster weighs 0.3125 ounce. How much would 8 hamsters weigh altogether?

53. 0.6 × 1.3
54. 8.74 × 2.23
55. 0.04 × 5.1
56. 2.6 × 3.9
57. 0.002 × 50
58. 0.04 × 0.0063
59. **MEASUREMENT** A rectangular tomato garden measures 5.8 feet by 12.6 feet. What is the area of the garden?

### Multiplying Decimals by Whole Numbers (pp. 173–176)

### Example 12 Find the quotient of 16.1 ÷ 7.

\[
\begin{array}{c}
\underline{2.3} \\
7 \overline{16.1} \\
-14 \\
\hline
21 \\
-21 \\
\hline
0
\end{array}
\]

60. 12.24 ÷ 36
61. 203.84 ÷ 32
62. 136.5 ÷ 35
63. 37.1 ÷ 14
64. 4.41 ÷ 5
65. 26.96 ÷ 8
66. **MONEY** In one year, Marcy made $214.68 in interest from her savings account. If she made the same amount of interest each month, how much did she make each month?
Dividing by Decimals  (pp. 179–183)

Divide.
67. 0.96 ÷ 0.6 68. 11.16 ÷ 6.2
69. 0.276 ÷ 0.6 70. 5.88 ÷ 0.4
71. 18.45 ÷ 0.5 72. 0.155 ÷ 0.25

Example 13 Find 11.48 ÷ 8.2.

Multiply the divisor and the dividend by 10 to move the decimal point one place to the right so that the divisor is a whole number.

Place the decimal point.
Divide as with whole numbers.

114.8
82
32
0

Marathons A marathon race is 26.2 miles long. David ran the marathon in 3.6 hours. On average, how many miles did he run per hour? Round to the nearest tenth.

Example 14 There are 24 students in the Spanish club. If the number of students in the school is 19 times this amount, would about 400, 500, or 600 be a reasonable number of students in the school?

24 × 19 is about 25 × 20 or 500. So, 500 is a reasonable number of students in the school.

PSI: Reasonable Answers  (pp. 184–185)

Determine reasonable answers for Exercises 74 and 75.

74. Height Evan is 5.75 feet tall. His sister, Cindy, is 0.8 times his height. Which is a reasonable height for Cindy: about 4 feet, 4.5 feet, or 6 feet? Explain your reasoning.

75. Money Derek has $23.80 in his pocket. He spent about 0.67 of this amount on a CD. Would $8, $16, or $20 be a reasonable price of the CD?
Write each decimal in word form.
1. 0.07
2. 8.051

Write each decimal in standard form and in expanded form.
3. six tenths
4. two and twenty-one thousandths

5. SCIENCE The mass of a particular chemical sample is given as 4.0023 grams. Write the mass in word form.

Use >, <, or = to compare each pair of decimals.
6. 2.03 \( \times \) 2.030
7. 7.960 \( \times \) 7.906

8. MULTIPLE CHOICE Dion recorded the daily high temperatures for Phoenix, Arizona, over five days in the table below.

<table>
<thead>
<tr>
<th>Day</th>
<th>Temperature (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>109.8</td>
</tr>
<tr>
<td>Tuesday</td>
<td>108.9</td>
</tr>
<tr>
<td>Wednesday</td>
<td>111.08</td>
</tr>
<tr>
<td>Thursday</td>
<td>108.92</td>
</tr>
<tr>
<td>Friday</td>
<td>111.0</td>
</tr>
</tbody>
</table>

Which of the following shows the daily high temperatures in order from least to greatest?
A 108.9°F, 108.92°F, 109.8°F, 111.0°F, 111.08°F
B 108.92°F, 108.9°F, 109.8°F, 111.0°F, 111.08°F
C 108.9°F, 108.92°F, 109.8°F, 111.08°F, 111.0°F
D 108.92°F, 108.9°F, 109.8°F, 111.08°F, 111.0°F

Round each decimal to the indicated place-value position.
9. 27.35; tens
10. 3.4556; thousandths

Estimate each sum or difference using the indicated method.
11. 38.23 + 11.84; rounding
12. $75.38 - $22.04; front-end estimation
13. 6.72 + 7.09 + 6.6; clustering

Find each sum or difference.
14. 43.28 + 31.45
15. 392.802 - 173.521

Multiply.
16. 7.8 \( \times \) 6
17. 0.92 \( \times \) 4
18. 12 \( \times \) 0.034
19. 4.56 \( \times \) 9.7

20. MULTIPLE CHOICE Armando and his 3 friends ordered a 4-foot sub for $25.99, 4 large drinks for $1.79 each, and a salad for $5.89. Which of the following represents the total cost, not including tax?
A $134.68
B $39.04
C $37.25
D $33.67

Divide. Round to the nearest tenth if necessary.
21. 7.2 \( \div \) 3
22. 0.45 \( \div \) 15
23. 36.08 \( \div \) 8.2
24. 10.79 \( \div \) 4.15

25. ANIMALS The greyhound can run as fast as 39.35 miles per hour. Without calculating, would about 12, 14, or 16 be a reasonable answer for the number of miles a greyhound could run at this rate in 0.4 hour? Explain your reasoning.
PART 1  Multiple Choice

Read each question. Then fill in the correct answer on the answer sheet provided by your teacher or on a sheet of paper.

1. Laura recorded the lengths in inches of a litter of newborn puppies. Which lists the lengths in order from least to greatest?
   A  8.42 in., 8.45 in., 8.9 in., 8.5 in., 8.64 in.
   B  8.42 in., 8.45 in., 8.5 in., 8.64 in., 8.9 in.
   C  8.9 in., 8.64 in., 8.5 in., 8.45 in., 8.42 in.
   D  8.42 in., 8.45 in., 8.64 in., 8.5 in., 8.9 in.

2. The table below shows Mr. Coughlin’s monthly heating bills for November through February. He estimated that the heating cost a total of $800 over these four months. Which best describes his estimate?

<table>
<thead>
<tr>
<th>Month</th>
<th>Bill ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>November</td>
<td>196.43</td>
</tr>
<tr>
<td>December</td>
<td>214.89</td>
</tr>
<tr>
<td>January</td>
<td>204.58</td>
</tr>
<tr>
<td>February</td>
<td>222.76</td>
</tr>
</tbody>
</table>

   F  More than the actual amount because he rounded to the nearest $10.
   G  Less than the actual amount because he rounded to the nearest $10.
   H  More than the actual amount because he rounded to the nearest $100.
   J  Less than the actual amount because he rounded to the nearest $100.

3. Zack plans on buying 4 shirts. The cost of each shirt ranges from $19.99 to $35.99. What would be a reasonable total cost for the shirts?
   A  $60  C  $120
   B  $70  D  $160

4. On Monday, 75 adults and 250 children visited the science museum. On Tuesday, 65 adults and 200 children visited the museum. The cost of a ticket is $7.50 for an adult and $5.25 for a child. Read the problem-solving steps below. Arrange the steps in order to find how much money the museum took in on these two days. Which list shows the steps in the correct order?

   Step K: Add the two products together.
   Step L: Multiply the cost of an adult ticket by the number of adults.
   Step M: Write down the number of adults and the number of children.
   Step N: Multiply the cost of a child’s ticket by the number of children.

   F  L, K, M, N  H  M, N, K, L
   G  L, M, N, K  J  M, N, L, K

5. The table shows the maximum speeds of winds in the U.S. for certain cities. What is the mean of the data?

<table>
<thead>
<tr>
<th>Place</th>
<th>Maximum Wind Speed (mph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta, GA</td>
<td>60</td>
</tr>
<tr>
<td>Houston, TX</td>
<td>51</td>
</tr>
<tr>
<td>Miami, FL</td>
<td>86</td>
</tr>
<tr>
<td>Mobile, AL</td>
<td>63</td>
</tr>
<tr>
<td>New York, NY</td>
<td>40</td>
</tr>
</tbody>
</table>

   A  46 mph  C  60 mph
   B  58 mph  D  86 mph

Source: The World Almanac

6. The number of hours that people studied for a Spanish test were 3, 2, 1, 0, 2, 1, 3, 5, 3, and 4. What is the mode of these hours?
   F  1  H  3
   G  2  J  5
7. Kenny recorded the heights of his tomato plants. Choose the group of numbers that lists the heights in order from least to greatest.
   A 3.28 ft, 3.29 ft, 3.06 ft, 3.41 ft
   B 4.15 ft, 4.10 ft, 4.10 ft, 4.01 ft
   C 3.23 ft, 3.30 ft, 3.35 ft, 3.53 ft
   D 2.89 ft, 2.98 ft, 2.99 ft, 2.88 ft

8. Danielle purchased 4 concert tickets. Each ticket was on sale for $5.95 off the original price. If the original price of each ticket was $29.95, which equation can be used to find \( t \), the total price of the 4 tickets Danielle purchased?
   F \( t = 4(5.95) - 4(29.95) \)
   G \( t = 29.95 - 5.95 \)
   H \( t = 5.95 - 29.95 \)
   J \( t = 4(29.95) - 4(5.95) \)

9. A student arranged some books on the shelf using the Dewey Decimal System. Choose the group of book numbers that is listed in order from least to greatest.
   A 749, 749.01, 749.21, 749.11
   B 109.012, 109.021, 109.001, 109.3
   C 456.076, 465.076, 465.189, 465.2
   D 688.89, 687.9, 688.91, 688.95

10. The temperature at 6:30 A.M. was 58.7°F. By 1:00 P.M., it was 92.6°F. Find the difference between the two temperatures in degrees Fahrenheit.

11. Before buying furniture, Sharon’s mom had $7,420.60 in her checkbook. Afterward, the balance was $4,684.90. How much did Sharon’s mom spend on her shopping trip?

12. Alexandra went to the mall on Saturday and bought the items in the table. Each item was on sale for the price shown.

<table>
<thead>
<tr>
<th>Item</th>
<th>Original Price ($)</th>
<th>Sale Price ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>bracelet</td>
<td>25.75</td>
<td>19.50</td>
</tr>
<tr>
<td>hat</td>
<td>19.95</td>
<td>15.00</td>
</tr>
<tr>
<td>movie</td>
<td>14.50</td>
<td>10.25</td>
</tr>
<tr>
<td>shirt</td>
<td>22.75</td>
<td>18.75</td>
</tr>
</tbody>
</table>

   a. How much did the items cost altogether?
   b. How much did Alexandra save?
   c. Explain how you determined how much she saved.