Two-Step Problems

Max earns $9 for every hour he rakes leaves. It took him 2 hours to rake the leaves in his yard. How much money did he earn raking leaves? If he already had $26, how much does he have now?

Solve by answering 1 to 7.

Answer 1 and 2 to understand the problem.

1. What do you know from reading the problem?

   Max earns _____ for every hour he rakes leaves.

   He raked leaves for _____ hours.

   He already had _____.

2. What do you need to find?

The problem has two questions. Answer the first one. Then, answer the second one.

Answer 3 to 6 to plan and solve the problem.

3. How can you answer the first question?

4. Solve. How much did Max earn raking leaves?

5. How can you answer the second question?

6. Solve. How much money did Max have after raking leaves?
Name ________________________________

Two-Step Problems (continued)

Answer 7 to check your solution.

7. **Reasoning** Use an estimate to explain why your answer to how much money Max has now is reasonable.

Solve each problem. Answer both questions.

8. Ms. Olivia brought 7 bunches of bananas to the school picnic. Each bunch had 5 bananas. She also brought 27 apples.

   How many bananas did she bring? _____ bananas

   How many more bananas than apples did Ms. Olivia bring? _____ more

9. There are 3 children and 2 adults in Zac’s family. Each person in the family donated $5 to charity.

   How many people are in Zac’s family? _____ people

   How much money did Zac’s family donate to charity? _____

10. Monique read 45 pages on Saturday and 39 pages on Sunday. Her book has 113 pages.

    How many pages did Monique read? _____ pages

    How many more pages does she need to read to finish her book? _____ pages

11. Tandy bought 4 boxes of cat treats. Each box contains 2 packages. It takes 5 days to use each package of cat treats.

    How many packages of cat treats did Tandy buy? _____ packages

    How many days worth of cat treats did Tandy buy? _____ days
Name ________________________________

Analyzing Given Information

Sally's painting is 14 inches long and 12 inches wide. Julie's painting is 16 inches long. How much longer is Julie's painting than Sally's painting?

Solve by answering 1 to 7.

Answer 1 to 4 to **understand** the problem.

1. What do you know from reading the problem?
   - Sally's painting is ___________ long.
   - Sally's painting is ___________ wide.
   - Julie's painting is ___________ long.

2. What do you need to find?

3. Do you have all the information you need to solve the problem?

4. What information is not needed to solve the problem?

Answer 5 and 6 to **plan and solve** the problem.

5. How can you solve the problem?

6. Solve. How much longer is Julie's painting than Sally's painting? ___________ inches

Answer 7 to **look back** at how you solved the problem.

7. Is your answer reasonable?

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J1 (student p. 1)
How much wider is Sally's painting than Julie's?

Find out by answering 8 and 9.

8. Do you have all the information you need to solve the problem?

9. What do you need to know in order to solve the problem?

So, there is not enough information to solve the problem:

Write the extra or missing information. Solve the problem if enough information is given.

10. Jason bought a red sweater and a black sweater. His change was $5. How much did Jason pay for both sweaters?

Write the extra or missing information. Solve the problem if enough information is given.

Use the graph for Exercises 11 and 12.

11. Turtles received 4 fewer votes than cats and 2 more votes than rabbits. How many votes did turtles receive?

12. How many more students voted for dogs than horses?

13. Reasoning Kim's painting is 12 inches long. Will it fit in a frame that has a length of 12 inches and a width of 8 inches? Explain.
Perimeter

Materials crayons or markers, centimeter ruler for each student.

Find the perimeter of the figure at the right by answering 1 to 3. Perimeter is the distance around a figure. Each space between lines equals 1 unit.

1. Trace the figure with a crayon or marker. Count the number of spaces as you trace.

2. How many spaces did you trace? _____

3. What is the perimeter of the figure? _____ units

You can also find the perimeter by adding the lengths of the sides.

Find the perimeter of the figure to the right by answering 4 to 6.

4. How many sides does this figure have? _____

5. Trace over the sides as you count and record the length of each side.

_____ + _____ + _____ + _____ + _____ + _____ = _____

6. What is the perimeter of the figure? _____ meters

Find the perimeter of the rectangle by answering 7 to 8.

Opposite sides of a rectangle have equal lengths.

7. Record the length of the sides. Find the sum.

10 + 3 + _____ + _____ = _____

8. What is the perimeter of the rectangle? _____ cm
9. **Reasoning** Use a ruler to measure each side of the figure in inches. What is the perimeter of the figure?

Find the perimeter of each figure.

10. 

11. 

12. 

13. 

14. 

15. 

16. **Reasoning** If the length of one side of a square is 3 inches, what is the perimeter of the square? Explain your answer.
Area of Rectangles and Squares (continued)

The formula for the area of a rectangle is \( A = \ell \times w \) or \( A = \ell w \).

7. **Reasoning** Use the formula to find the area of a rectangle that is 8 meters long and 5 meters wide.

\[
A = \ell \times w \\
\downarrow \\
A = (\blanks) \times (\blanks) = \blanks \text{ square meters}
\]

A square is a type of rectangle where all of the side lengths are equal.

Find a formula for the area of the square shown by answering 8 and 9.

8. Use the formula \( A = \ell w \) to find the area of the square.

\[
\blanks \times \blanks = \blanks \text{ mm}^2
\]

9. If \( s \) equals the length of a side of a square, how could you find the area of any square? \( A = \) __________

Find the area of each figure.

10. 7 in. 11. 5 cm 12. 2 km

Find the area of the rectangle with the given dimensions.

13. \( \ell = 15 \text{ mm}, w = 4 \text{ mm} \)

14. \( \ell = 3 \text{ cm}, w = 10 \text{ cm} \)

15. **Reasoning** The area of a square is 81 square feet. What is the length of each side?

16. **Reasoning** Using only whole numbers, what are all the possible dimensions of a rectangle with an area of 12 square centimeters?
Area of Rectangles and Squares

Maria’s flower garden is in the shape of a rectangle that measures 6 feet long and 4 feet wide. What is the area of the garden?

Find a formula for area of a rectangle by answering 1 to 6.

1. The rectangle at the right is a model of the garden. How many squares are in the model? __________

2. What is the area of the garden? ______ square feet

3. What is the length of the garden? ______ feet

4. What is the width of the garden? ______ feet

5. What could you multiply to find the area of the garden? ______

6. Find the area of each rectangle by counting squares. Write the area in the table below. Complete the table.

<table>
<thead>
<tr>
<th>Rectangle</th>
<th>Area</th>
<th>Length</th>
<th>Width</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maria’s garden</td>
<td>24</td>
<td>6</td>
<td>4</td>
<td>6 × 4</td>
</tr>
<tr>
<td>A</td>
<td></td>
<td>7</td>
<td></td>
<td>7 × _____</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
<td>_____ × _____</td>
</tr>
<tr>
<td>Any</td>
<td>Any</td>
<td>ℓ</td>
<td>w</td>
<td>ℓ × _____</td>
</tr>
</tbody>
</table>
Reading and Making a Bar Graph (continued)

Use the grid on the right for Exercises 7 to 9.

7. Draw a graph of the data in the table.

<table>
<thead>
<tr>
<th>Cities We Want to See</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>Votes</td>
</tr>
<tr>
<td>Anaheim</td>
<td>5</td>
</tr>
<tr>
<td>Orlando</td>
<td>12</td>
</tr>
<tr>
<td>Chicago</td>
<td>2</td>
</tr>
<tr>
<td>Washington</td>
<td>7</td>
</tr>
</tbody>
</table>

8. Which city got the most votes?

9. Did twice as many students vote for Orlando as voted for Washington?

Use the bar graph at the right to answer Exercises 10 to 12.

10. Which craft did most students say was their favorite?

11. How many students chose boot making as their favorite craft demonstration?

12. How many more students chose wood carving than chose chair-caning as their favorite crafts?
Reading and Making a Bar Graph

Materials colored pencils, markers, or crayons, grid paper.

Robert’s class voted for their favorite country, not including the United States. The results are shown in the table.

Make and use a bar graph of the data by answering 1 to 6.

1. Write a title above the graph. Label the axes: Country and Votes.

2. Complete the scale. Since the data go up to 11, make the scale by 2s.

3. Draw a bar for each country. Since Canada got 8 votes, color 4 squares above Canada, up to the 8 mark. For Japan, color one and a half squares because 3 is halfway between 2 and 4.

4. Which country got the least number of votes, that is, which has the shortest bar?

5. Which country got the greatest number of votes, that is, which has the longest bar?

6. Reasoning Which bar is twice as long as the bar for Great Britain? What does that mean?

<table>
<thead>
<tr>
<th>Our Favorite Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td>Canada</td>
</tr>
<tr>
<td>Great Britain</td>
</tr>
<tr>
<td>Japan</td>
</tr>
<tr>
<td>Mexico</td>
</tr>
</tbody>
</table>
Interpreting Graphs (continued)

For 10 to 13, use the graph on the right.

10. What is the interval of the scale for this bar graph?

11. Which student made the most free throws?

12. How many free throws did Tawny make?

13. How many more free throws did Janet make than Ian?

For 14 to 18, use the graph on the right.

14. What is the interval of the scale?

15. Which park received 275 votes?

16. Which park received twice as many votes as Carlsbad Caverns?

17. How many fewer votes did Carlsbad Caverns receive than the Grand Canyon?

18. Reasoning Which two parks received the closest number of votes? Explain how you know.
Interpreting Graphs

Use the bar graph at the right to answer 1 to 9.

1. What is this bar graph about?

The scale on a graph is the numbers used to describe the data.

2. The units used on this scale are miles per hour. What numbers does the scale use?

The interval of the scale is the number you skip count by.

3. What is the interval of the scale? _____

4. Which animal has a maximum speed halfway between 20 and 30 miles per hour? _____

5. What number is halfway between 20 and 30? _____

6. What is the maximum speed of an elephant? _____ miles per hour

7. Which animal has a maximum speed of 35 miles per hour? _____

8. Which animal(s) has a maximum speed that is 15 miles per hour greater than an elephant? _____

9. **Reasoning** Do any of the animals in the graph have a speed that is twice as fast as the elephant? How do you know?