Story Problems page 3 of 3

6 Max is building a cage for his ducks. The base of the cage is 208 square feet. If one side is 13 feet, how long is the other side? The cage is a rectangular prism.

   Solve the problem:

   What strategy did you use? Why?

7 Zoe is saving money to go on a trip to Mexico. She earns $16.75 for mowing the lawn. If Zoe mows the lawn 28 times, how much money will she earn?

   Solve the problem:

   What strategy did you use? Why?

8 Briana is making a box for her art supplies. The box has a base of 176 square inches. The height of the box is 26 inches. What is the volume of the box?

   Solve the problem:

   What strategy did you use? Why?
Leah’s Problems

1  Leah needs to solve the three problems below. She has to use the standard algorithm for multiplication at least once. For each problem, decide which strategy Leah should use and then solve the problem.

\[
\begin{align*}
541 \times 32 &= 17,312 \\
58 \times 25 &= 1,450 \\
199 \times 65 &= 12,935
\end{align*}
\]

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Strategy</th>
<th>Strategy</th>
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</table>

2  Leah solved \(302 \times 67\) by multiplying 300 by 60 and 2 by 7 and adding those products together. Did she get the right answer? Why or why not?

Review

3  What is \(\frac{3}{4}\) of 96?

4  What is \(\frac{4}{5}\) of 80?

5  What is \(\frac{2}{3}\) of 45?
2- by 3-Digit Multiplication

1. Solve each problem below using the traditional (standard) multiplication algorithm.

   \[
   \begin{array}{ccc}
   785 & \times 39 & 804 \times 26 & 653 \times 98 \\
   \end{array}
   \]

2. Choose one problem above that you could solve easily with a different strategy. Explain which strategy you would use and why.

3. Fill in the boxes.

   \[
   \begin{array}{ccc}
   67 & \times 76 & 49 \times 27 \\
   42 & + 49 & 43 + 8 \\
   \end{array}
   \]

Review

4. Claudia says that \(17 \times 80\) is the same as \(17 \times 8 \times 10\). Do you agree or disagree? Explain.

5. Andre says that \(4 \times 27\) is the same as \(4 \times 3 \times 9\). Do you agree or disagree? Explain.
## Story Problem Paper

### Division Combination:

### Story Problem to Match:

### Answer:

<p>| | |</p>
<table>
<thead>
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</table>

### Ratio Table

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</table>

### Figuring Box

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<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Division on a Base Ten Grid

1 Complete the following multiplication problems.

\[
\begin{array}{cccccc}
14 & 14 & 14 & 14 & 14 & 14 \\
\times 2 & \times 3 & \times 10 & \times 5 & \times 20 & \times 30 \\
\end{array}
\]

2 Solve the following division problems. Use the multiplication problems above and the grids to help.

- a \(322 \div 14 = \)_______
- b \(238 \div 14 = \)_______
Water Conservation page 1 of 2

Do you want to help conserve water? Here are some water-saving tips. Be sure to show all of your work for each of these problems.

1. If you leave the faucet running while you take a 5-minute shower, you use about 400 cups of water. How many gallons is that?

<table>
<thead>
<tr>
<th>Ratio Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gallons</td>
</tr>
<tr>
<td>Cups</td>
</tr>
</tbody>
</table>

   a. If you get wet, turn off the water to soap up, and turn the water back on to rinse off, you only use about about 64 cups of water. How many gallons is that?

   b. If you take a shower every day and use the method described in part a above, how many gallons of water can you save in a day? How many gallons of water can you save in a week?
Water Conservation  page 2 of 2

2. If you fill the bathtub all the way, it takes about 576 cups of water. How many gallons is that?

   a. If you fill the bathtub just enough to wash yourself, it takes about 144 cups of water. How many gallons is that?

   b. If you take a bath 3 times a week and use the second method described above, how many gallons of water can you save in a week? How many gallons of water can you save in a month?
Water Conservation Challenge

1. If you leave the hose running the whole time you wash a car, it takes about 4,800 cups of water. If you fill a bucket, wash the car, and then rinse it with the hose, it takes about 240 cups of water. How many gallons of water can you save by using a bucket and hose instead of leaving the water running?

2. Mr. Mugwamp has a leaky faucet. It leaks 2 drops of water every second. If there are 3,840 drops of water in a cup, how many gallons of water will be wasted in a single day (24 hours)?
Division with Tables & Sketches

1. Fill in the ratio table for 19.

<table>
<thead>
<tr>
<th>Number of Groups</th>
<th>1</th>
<th>2</th>
<th>10</th>
<th>5</th>
<th>20</th>
<th>15</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Solve the two division problems using the ratio table above and sketches to help. You can add to the ratio table if you want to.

- **ex** $304 \div 19 = 16$
- **a** $608 \div 19 = \ldots$
- **b** $456 \div 19 = \ldots$

<table>
<thead>
<tr>
<th>Computation</th>
<th>Computation</th>
<th>Computation</th>
</tr>
</thead>
</table>
| 19 | 304
| - 190
| 114
| - 95
| 19
| - 19
| 0 |

<table>
<thead>
<tr>
<th>Sketch</th>
<th>Sketch</th>
<th>Sketch</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 5 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 190 95 19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Use the standard multiplication algorithm to solve the problems below. Show your work.

$84 \times 36$
$79 \times 26$
$86 \times 32$
$92 \times 37$