Divide decimals by integers

1. Use place value counters to work out the divisions.
   a) $8.4 \div 4 = \square$

<table>
<thead>
<tr>
<th>Ones</th>
<th>Tenths</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>61</td>
</tr>
</tbody>
</table>

   b) $12.3 \div 3 = \square$

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
<th>Tenths</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>1</td>
<td>81</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

2. Work out the division. Draw your answer.
   $16.4 \div 4 = \square$

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
<th>Tenths</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>1</td>
<td>81</td>
</tr>
<tr>
<td>1</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

3. Brett uses short division to work out $13.2 \div 6$

   \[
   \begin{array}{c|c|c|c|c|c}
   & 0 & 2 & 2 & 1 & 3.2 \\
   \hline
   6 & 7 & 2 & 2 & \cdot & \cdot \\
   \hline
   1 & 3 & 2 & 8 & \cdot & \cdot \\
   \end{array}
   \]

   Use short division to work out the calculations.
   a) $72.24\ldots$
   b) $81.84\ldots$

4. Work out the divisions.
   a) $25.6 \div 8 = \square$
   d) $= 19.45 \div 5$
   b) $14.8 \div 4 = \square$
   e) $202.35 \div 3 = \square$
   c) $18.48 \div 6 = \square$
   f) $105.12 \div 9 = \square$

© White Rose Maths 2019
5 Esther solves $13.2 \div 4$ by partitioning $13.2$ into two numbers that are easier to divide.

Use Esther’s method to complete the part-whole model and calculation.

<table>
<thead>
<tr>
<th>13.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
</tr>
<tr>
<td>1.2</td>
</tr>
</tbody>
</table>

$13.2 \div 4 = 3.3$

Use Esther’s method to complete the part-whole model and calculation.

a) $9.2 \div 4 = \underline{？}$

b) $16.5 \div 3 = \underline{？}$

Compare answers with a partner. Did you partition your numbers in the same way?

6 Work out the divisions.

a) $9.64 \div 4 = \underline{？}$

b) $96.4 \div 4 = \underline{？}$

$0.964 \div 4 = \underline{？}$

$9.64 \div 8 = \underline{？}$

b) $19.44 \div 9 = \underline{？}$

$19.53 \div 9 = \underline{？}$

$19.62 \div 9 = \underline{？}$

7 Fill in the missing numbers.

$3.6 \div 4 = 36 \div \underline{？}$

$3.6 \div 4 = \underline{？} \div 8$

8 Complete the calculation.

$8.4 \div \underline{？} = 4.2 \div \underline{？}$

How many different solutions can you find?

What patterns do you notice? Talk about it with a partner.