1. Tommy is using base 10 to represent decimals.

He uses \( \square \) to represent 1 whole.

He uses \( \square \) to represent \( \frac{1}{10} \) or 0.1

He uses \( \square \) to represent \( \frac{1}{100} \) or 0.01

He uses \( \square \) to represent \( \frac{1}{1000} \) or 0.001

What decimals are represented?

\( \text{a)} \) \[
\begin{array}{c}
\text{\square \square \square} \\
\text{\square \square} \\
\text{\square \square \square \square} \\
\end{array}
\]

\( 5.321 \)

\( \text{b)} \) \[
\begin{array}{c}
\text{\square \square \square} \\
\text{\square \square \square \square \square} \\
\text{\square \square \square \square} \\
\end{array}
\]

\( 1.734 \)

\( \text{c)} \) \[
\begin{array}{c}
\text{\square \square} \\
\text{\square \square \square \square} \\
\end{array}
\]

\( 0.357 \)

2. a) Represent each number using base 10

\( 0.512 \) \( 1.352 \) \( 2.003 \)

b) Use your representations to help you complete the statements.

\( 0.512 = 0.5 + 0.01 + 0.002 \)

\( 1.352 = 1 + 0.3 + 0.05 + 0.002 \)

\( 2.003 = 2 + 0.003 \)

3. Here is a thousand square.

Part of the square has been coloured.

\( \text{a)} \) Why do you think it is called a thousand square?

It’s split into a thousand parts

\( \frac{113}{1000} \)

\( \text{b)} \) What fraction of the square has been coloured?

\( 0.113 \)

\( \text{c)} \) Write the fraction as a decimal.

\( \frac{0.113}{1} \)
4. What fraction of each square has been shaded?

Write each number as a fraction and as a decimal.

a)

\[
\text{fraction } = \frac{371}{1000} \quad \text{decimal } = 0.371
\]

b)

\[
\text{fraction } = \frac{503}{1000} \quad \text{decimal } = 0.503
\]

5. Colour the grids to represent the fraction and decimal.

a) \[
\frac{73}{1000}
\]

b) \[0.302\]

6. Represent these numbers on a place value chart.

a) 1.372  

b) 0.091  

c) 3.542

7. Show that \[
\frac{400}{1000}
\]
is the same as 0.4.

8. Write the numbers represented by the place value charts.

a)

<table>
<thead>
<tr>
<th>Ones</th>
<th>Tenths</th>
<th>Hundredths</th>
<th>Thousandths</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

b)

<table>
<thead>
<tr>
<th>Ones</th>
<th>Tenths</th>
<th>Hundredths</th>
<th>Thousandths</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>