

Monday

Maths – Tenths as Decimals (page 2)

Question 1 – This question shows different **representations** of decimal numbers. A **representation** refers to a number that has been shown in different ways using numerals, words or mathematical equipment, for example.

A is shown as a **hundred square**. A **hundred square** is a square split into 100 parts. It is often used to show the numbers from 1-100. It can also be used to show the relationship between tenths and hundredths when exploring fractions.

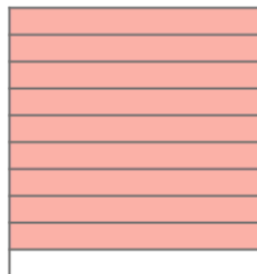
B and D are shapes that have been split into fractions and shaded, while C uses **place value counters**. **Place value counters** refer to a physical resource which represent numbers. They are usually in different colours and have different numbers written on them, to represent 'ones', 'tens', 'hundreds' and so on. They can also be used to represent decimal numbers.

Children must look at each representation and write the fraction being shown beneath each. Children must then identify which letter is the odd one out by using the fractions they have written to help. The correct answer is **A. 0.6; B. 0.4; D. 0.3; C shows 0.7 or $\frac{7}{10}$.**

Question 2 – This question shows a blank **representation** for children to complete so that it matches the information in the table. The table has nine tenths written in words which must be written as both a decimal and a fraction to complete the table.

The correct answers are shown below.

Words	nine tenths
Fraction	$\frac{9}{10}$
Decimal	0.9



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Question 3 – For this question, children must read the clues about Jon's decimal number and decide whether Megan's statement could be correct. Children have been given a **number line** to help them to complete this question. A **number line** is a horizontal, straight line which has numbers placed at equal points. Most number lines begin at 0, however, this is not always the case.

Once children have decided whether the statement is correct, they must write a sentence to explain their choice and give any other numbers that Jon could be thinking of. The correct answer is that **Megan is not correct because the decimal must be bigger than 0.1 and smaller than 0.6. As such, Jon could be thinking of any decimal between those values, for example, 0.2, 0.3, 0.4 or 0.5.**

Tuesday

Maths – Divide 1 and 2 Digits by 10 (page 4)

Question 1 – For this question, children must match each calculation to the correct answer. Each answer is shown on a **place value chart** which shows the value of each digit within a number. In this question, the values are shown on the **place value chart** in digits. It may be helpful for children to use a **place value chart** to help them to calculate their answer using the rule for dividing by ten shown below.

The rule for dividing by ten using a place value chart is to move each digit **one** column to the **right**. The example below shows that $93 \div 10 = 9.3$.

To divide by 10, the 9 tens is moved one column to the right and becomes 9 ones.

tens	ones	tenths
9	3	
	9	3

To divide by 10, the 3 ones is moved one column to the right and becomes 3 tenths.

The correct answers are **A. 4.7; B. 0.4; C. 7.4**

Question 2 – For this question, children must look at the **representations** given and complete the calculations. For this question, each **representation** uses a **place value chart** to show the value of the digits in the numbers being divided. For images A and C, the **place value charts** give the value of the digits using **Base 10** equipment.

This is **Base 10**. ← These sticks represent tens. ← These cubes represent ones,

Children can use **place value charts** to move the digits to calculate the answers as explained in question 1 above. The answers to the calculations are shown below.

A.	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">tens</th> <th style="width: 25%;">ones</th> <th style="width: 25%;">tenths</th> <th style="width: 25%;">hundredths</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">●●●●</td> <td></td> <td></td> </tr> </tbody> </table>	tens	ones	tenths	hundredths		●●●●			÷ 10 =	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">tens</th> <th style="width: 25%;">ones</th> <th style="width: 25%;">tenths</th> <th style="width: 25%;">hundredths</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center; font-size: 1.5em;">6</td> <td style="text-align: center; font-size: 1.5em;">5</td> <td></td> </tr> </tbody> </table>	tens	ones	tenths	hundredths		6	5	
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Tuesday

Maths – Divide 1 and 2 Digits by 10 (page 4)

Question 3 – This question is more open-ended than the others. Children look at the working out shown and identify the mistake made by Christina. For this question, a **Gattegno chart** has been used to show her answer.

10	20	30	40	50	60	70	80	90	
1	2	3	4	5	6	7	8	9	
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	

Each row is ten times bigger than the row below.

To use a **Gattegno chart** to divide by ten, you place counters over the starting number and move the counters down one row to reveal the answer as each row is ten times smaller than the row above. An example is shown below.

The calculation being completed is $24 \div 10$ which has been split into tens and ones.

10	20	30	40	50	60	70	80	90	
1	2	3	4	5	6	7	8	9	
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	

Each circle has been moved down one row to show that it has been divided by 10. This shows that $24 \div 10 = 2.4$.

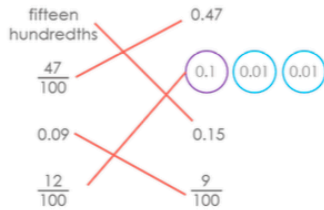
The correct explanation for this question is that Christina has moved the tens digit correctly to 8 but has moved the ones digit up to 10 instead of down to 0.1. The correct answer is 8.1.

Wednesday

Maths – Hundredths as Decimals (page 6)

Question 1 – For this question, children must look at the different **representations** given and match the equivalent values. Some **representations** are given as fractions over a hundred, others use **place value counters** to illustrate the value of each digit, one is written in words and some as written decimal numbers. If you need to recap representations or place value counters, take a look at page 2!

The correct answers are shown below.



Question 2 – For this question, children identify whether the statement is true or false using what they know about hundredths being written as decimal numbers. The statement is **false because 0.3 is equivalent to three tenths**.

Question 3 – For this question, children must convert each of the fractions to decimal numbers.

The correct answer is shown below.

$\frac{25}{100}$	0.25
$\frac{89}{100}$	0.89
$\frac{6}{100}$	0.06

Question 4 – For this question, children have been given a **number line** with some decimal numbers marked. This **number line** is a horizontal line marked in hundredths which starts at 0.5 and ends at 0.6. The children must look at arrows A and B and write the decimal numbers they are pointing to. To do this, it may be helpful to practise counting in hundredths using the **number line** for support. Counting in hundredths, the **number line** shows 0.5, 0.51, 0.52, 0.53, 0.54, 0.55, 0.56, 0.57, 0.58, 0.59, 0.6.

The decimal numbers are **A = 0.52; B = 0.58**

Wednesday

Maths – Hundredths as Decimals (page 6)

Question 5 – For this question, children must read the statements from Emily and Callum and decide who is correct. Children must then write a sentence to explain why the statement is correct.

The correct answer is **Callum is correct. To show 90 hundredths, the decimal should be 0.9.**

Question 6 – This question has **digit cards** for children to use to create three decimal numbers that meet the given clues. They must then write the fractions that are equivalent to the decimals they have created.

These are the **digit cards** given in this question. →

4	0	0	7
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There are various answers, three correct answers are shown below.

$$\begin{array}{|c|} \hline 0 \\ \hline \end{array} \cdot \begin{array}{|c|} \hline 0 \\ \hline \end{array} \begin{array}{|c|} \hline 4 \\ \hline \end{array} = \frac{\begin{array}{|c|} \hline 4 \\ \hline \end{array}}{\begin{array}{|c|} \hline 100 \\ \hline \end{array}} \quad \begin{array}{|c|} \hline 0 \\ \hline \end{array} \cdot \begin{array}{|c|} \hline 7 \\ \hline \end{array} \begin{array}{|c|} \hline 4 \\ \hline \end{array} = \frac{\begin{array}{|c|} \hline 74 \\ \hline \end{array}}{\begin{array}{|c|} \hline 100 \\ \hline \end{array}} \quad \begin{array}{|c|} \hline 0 \\ \hline \end{array} \cdot \begin{array}{|c|} \hline 4 \\ \hline \end{array} \begin{array}{|c|} \hline 7 \\ \hline \end{array} = \frac{\begin{array}{|c|} \hline 47 \\ \hline \end{array}}{\begin{array}{|c|} \hline 100 \\ \hline \end{array}}$$

Question 7 – For this question, children must look at the inequality statement and decide whether it is correct. The inequality statement uses the symbol $>$ which means 'more than'. Once they have decided, children must write a sentence to explain their choice.

The correct answer is **the statement is incorrect because 6 tenths and 8 hundredths is less than 8 tenths and 6 hundredths. The statement should be $0.68 < 0.86$.**

Thursday

Maths – Divide 1 or 2 Digits by 100 (page 9)

Question 1 – For this question children must draw counters on the given **place value charts** to show the answers to the calculations given. Children may use a **place value chart** to help them to calculate the answers if needed using the rule for dividing by one hundred shown below. These digits can be represented using digits as below or counters can be drawn to represent each digit.

The rule for dividing by one hundred using a **place value chart** is to move each digit **two** columns to the **right**. An example showing $93 \div 100 = 0.93$ is given below.

To divide by 100, the 9 tens is moved two columns to the right and becomes 2 tenths.

tens	ones	● tenths	hundredths
9	3		
	0	9	3

To divide by 100, the 3 ones is moved two columns to the right and becomes 3 hundredths.

As there are no digits before the decimal point, '0' needs to be added as a place holder.

The correct answers are shown on the **place value charts** below.

$$21 \div 100 = 0.21$$

10	1	● 0.1	0.01
		● ●	●

$$30 \div 100 = 0.3$$

10	1	● 0.1	0.01
		● ● ● ●	

Question 2 – For this question, children must match each calculation to the correct answer to identify which is the odd one out. Children can use a **place value chart** as shown in question 1 to calculate the answer to each calculation.

0.7 is the odd one out, the other pairs are shown below.

$34 \div 100$	0.76	$23 \div 100$
0.34	$5 \div 100$	0.05
$76 \div 100$	0.23	0.7

Thursday

Maths – Divide 1 or 2 Digits by 100 (page 9)

Question 3 – For this question, children must identify the number which is 100 times smaller than forty seven, which is the same as calculating $47 \div 100$. Children may not see the link straight away and may need reminding the dividing by 100 is the same as making a number one hundred times smaller.

The correct answers is **0.47**

Question 4 – For this question, children must fill in the missing answers to each calculation. For support, children can use **place value charts** as in previous questions if needed.

The correct answers are shown below.

$$4 \div 100 = 0.04$$

$$0.28 = 28 \div 100$$

$$53 \div 100 = 0.53$$

$$0.79 = 79 \div 100$$

Question 5 – This question is more open ended for children to explore. The question gives clues to the calculation that Una has completed and children must use this to give five different possible calculations and answers that Una could have created using exactly 7 counters on the **place value grid**. For support, children can draw themselves a **place value chart** to use the method explained on page 14.

There are various answers, five examples are shown below;

10	1	0.1	0.01	
		●●●●●●		$70 \div 100 = 0.7$
10	1	0.1	0.01	
		●●●●●●	●	$61 \div 100 = 0.61$
10	1	0.1	0.01	
		●●●●●●	●●	$52 \div 100 = 0.52$
10	1	0.1	0.01	
		●●●●	●●●●	$43 \div 100 = 0.43$
10	1	0.1	0.01	
		●●●●	●●●●	$34 \div 100 = 0.34$

Thursday

Maths – Divide 1 or 2 Digits by 100 (page 9)

Question 6 – This question shows a number on a **Gattegno chart** as explained on page 7. For this question, the chart has slightly different rows used but the same rule applies as before; each row is 10 times smaller than the one above.

10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09

To use a **Gattegno chart** to divide by 100, the counters need to be moved down two rows.

Children must use the **Gattegno chart** to explain what Zaynab's answer will be using the information given in the question. Children must then explain why this is correct by writing a sentence.

The answer to Zaynab's calculation would be 0.86 because you move each counter down two places to divide by 100.

Question 7 – For this question, children must read Affan and Jude's statements and decide whether they agree that both statements are correct. Children must then write a sentence to explain their choice.

The correct answer is that Affan's statement is true because he has moved the digits two places right to divide by 100 and make the number 100 times smaller. Jude's statement is false because she has multiplied by 100 rather than dividing by 100.