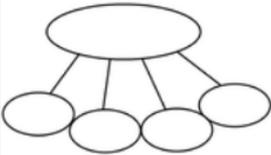
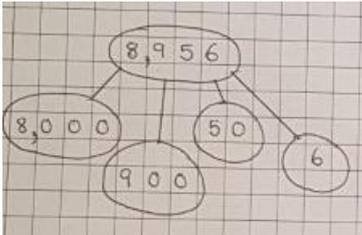
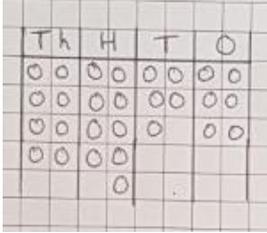
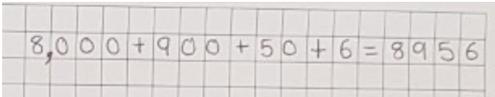
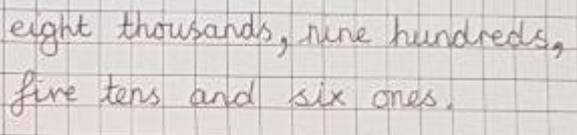


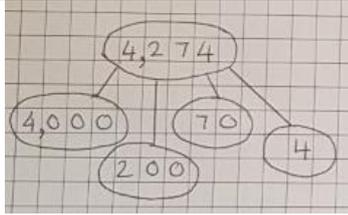
Year 4 Maths Distance Teaching and Learning

Week beginning: 27th April 2020

Lesson 1										
Learning Intention: WALT represent four-digit numbers.	Key Vocabulary: Placeholder – a zero in a number to show there are no amounts in that place value column.	What you will need: A computer, tablet or phone for the starter Maths book Pencil and ruler Video: Year 4 Maths lesson 1 WB 27.04.20								
Starter										
Complete a garage session on Times Tables Rock Stars.										
Main Teaching										
Watch the lesson Year 4 Maths lesson 1 WB 27.04.20 which will guide you through the lesson.										
We are going to look at representing a 4-digit number in four ways. We are going to use a whole-part whole diagram, a place value chart, a number sentence and a place value worded sentence.										
<b style="color: red;">Whole-part-whole diagram 	<b style="color: red;">Place Value Chart <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #add8e6;"> <th style="padding: 5px;">Thousands</th> <th style="padding: 5px;">Hundreds</th> <th style="padding: 5px;">Tens</th> <th style="padding: 5px;">Ones</th> </tr> </thead> <tbody> <tr> <td style="height: 50px;"></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Thousands	Hundreds	Tens	Ones					<b style="color: red;">A number sentence $\square\square\square\square + \square\square\square + \square\square + \square = \square\square\square\square$
Thousands	Hundreds	Tens	Ones							
<b style="color: red;">Place value worded sentence \square thousands, \square hundreds, \square tens and \square ones.										
Example 1: Digits: 8,956										
										
										

Example 2:

Digits: 4,274



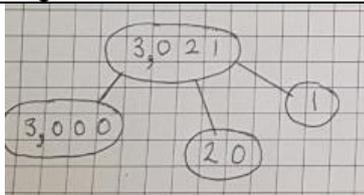
Th	H	T	O
00	00	00	00
00		00	00
		00	
		0	

$$4,000 + 200 + 70 + 4 = 4,274$$

four thousands, two hundreds,
seven tens and four ones.

Example 3:

Digits: 3,021



Th	H	T	O
00		00	0
0			

$$3,000 + 20 + 1 = 3,021$$

three thousands, two tens and
one one.

Be careful of the placeholder in this example. If you do not use it, the number becomes 321 which is significantly different. You must use the placeholder to ensure the digit '3' remains in the thousands column.

Independent Tasks

Please complete 1 or 2 challenges. If you are finding a challenge too tricky or too easy after 3 questions, you should switch challenges. After you have completed your challenge, check your answers against the mark scheme. If you got an answer wrong, look carefully and identify where you made a mistake.

Challenge 1

Draw a whole-part-whole diagram for each of the numbers below and record the value of the red digit in a sentence. For example – 7,943 The value of the 4 digit is 40.

- 1) 5,268
- 2) 3,269
- 3) 6,354
- 4) 4,975
- 5) 3,821
- 6) 9,340
- 7) 7,236
- 8) 1,903

Challenge 2

Draw a whole-part-whole diagram for each of the numbers below and record the value of the red digit in a sentence. For example – 7,943 The value of the 4 digit is 40.

- 1) 5,571
- 2) 6,240
- 3) 3,504
- 4) 1,090

Complete the missing numbers in the number sentences below.

- 5) $9,563 = 9000 + 500 + \underline{\quad} + 3$
- 6) $1,357 = \underline{\quad} + 300 + 50 + \underline{\quad}$
- 7) $\underline{\quad} + 40 + 2 + \underline{\quad} = 5,642$
- 8) $6,062 = 60 + \underline{\quad} + \underline{\quad}$

Challenge 3

Complete the grid below in your book.

	Place value chart	Whole-part-whole	Number sentence	As words								
1	<table border="1"> <tr> <td>Th</td> <td>H</td> <td>T</td> <td>O</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Th	H	T	O							Three thousands, four hundreds and six.
Th	H	T	O									
2	<table border="1"> <tr> <td>Th</td> <td>H</td> <td>T</td> <td>O</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Th	H	T	O						$7000+90+2$	
Th	H	T	O									
3	<table border="1"> <tr> <td>Th</td> <td>H</td> <td>T</td> <td>O</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Th	H	T	O							
Th	H	T	O									
4	<table border="1"> <tr> <td>Th</td> <td>H</td> <td>T</td> <td>O</td> </tr> <tr> <td>● ● ● ●</td> <td>● ● ● ● ●</td> <td>● ● ● ●</td> <td></td> </tr> </table>	Th	H	T	O	● ● ● ●	● ● ● ● ●	● ● ● ●				
Th	H	T	O									
● ● ● ●	● ● ● ● ●	● ● ● ●										

Challenge X

True or false? Explain your answer.

8,400 can be made from 840 tens.

Review

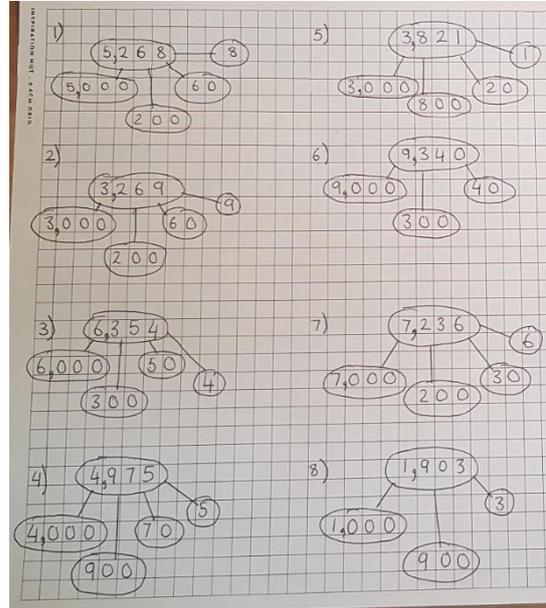
- 1) I need £4,782 to buy a new car. I have saved £4,000 and my dad gave me £82 for my birthday. How much more do I need?
- 2) Write the number that is four hundred less than seven thousand, nine hundred and sixty-three.

Mark Scheme – Lesson 1

Independent Tasks

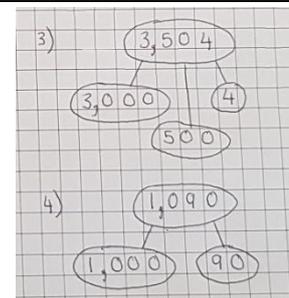
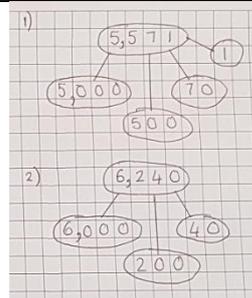
Challenge 1

- 1) 5,268 – The value of the red digit is 60
- 2) 3,269 – The value of the red digit is 9
- 3) 6,354 – The value of the red digit is 6,000
- 4) 4,975 – The value of the red digit is 70
- 5) 3,821 – The value of the red digit is 800
- 6) 9,340 – The value of the red digit is 40
- 7) 7,236 – The value of the red digit is 7,000
- 8) 1,903 – The value of the red digit is 900



Challenge 2

- 1) 5,571 – The value of the red digit is 70
 - 2) 6,240 – The value of the red digit is 200
 - 3) 3,504 – The value of the red digit is 4
 - 4) 1,090 – The value of the red digit is 1,000
- 5) $9,563 = 9,000 + 500 + 60 + 3$
 - 6) $1,357 = 1,000 + 300 + 50 + 7$
 - 7) $5,000 + 40 + 2 + 600 = 5,642$
 - 8) $6,062 = 60 + 6,000 + 2$



Challenge 3

	Place value chart	Whole-part-whole	Number sentence	As words								
1	<table border="1"> <tr> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> <tr> <td>●●●</td> <td>●●●</td> <td></td> <td>●●●●</td> </tr> </table>	Th	H	T	O	●●●	●●●		●●●●		$3,000 + 400 + 6 = 3,406$	Three thousands, four hundreds and six.
Th	H	T	O									
●●●	●●●		●●●●									
2	<table border="1"> <tr> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> <tr> <td>●●●●</td> <td></td> <td>●●●●</td> <td>●●</td> </tr> </table>	Th	H	T	O	●●●●		●●●●	●●		$7,000 + 90 + 2 = 7,092$	Seven thousands, nine tens and two ones.
Th	H	T	O									
●●●●		●●●●	●●									
3	<table border="1"> <tr> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> <tr> <td>●</td> <td>●●●</td> <td>●●●●</td> <td></td> </tr> </table>	Th	H	T	O	●	●●●	●●●●			$1,000 + 500 + 80 = 1,580$	One thousand, five hundreds and eight tens.
Th	H	T	O									
●	●●●	●●●●										
4	<table border="1"> <tr> <th>Th</th> <th>H</th> <th>T</th> <th>O</th> </tr> <tr> <td>●●●</td> <td>●●</td> <td>●●</td> <td></td> </tr> </table>	Th	H	T	O	●●●	●●	●●			$4,000 + 300 + 30 = 4,330$	Four thousands, three hundreds and three tens.
Th	H	T	O									
●●●	●●	●●										



Challenge X

This is true because 800 tens is the same as $800 \times 10 = 8,000$. Then, 40 tens is the same as $40 \times 10 = 400$.

$$8,000 + 400 = 8,400$$

Review

- 1) $4,000 + 80 + 2 + \underline{\quad\quad} + £4,782$. The missing place value amount is 700 so you need £700 more.
- 2) 7,563

Lesson 2

<p>Learning Intention:</p> <p>WALT compare four-digit numbers.</p>	<p>Key Vocabulary:</p> <p>Significant – important</p> <p>Greater – bigger than</p>	<p>What you will need:</p> <p>A computer, tablet or phone for the starter</p> <p>Maths book</p> <p>Pencil and ruler</p> <p>Video: Year 4 Maths lesson 2 WB 27.04.20</p>
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Starter

Complete a sound check on Times Tables Rock Stars.

Main Teaching

We are going to look at comparing and ordering a range of four-digit numbers, based on the digits within them. It is important that we compare the place value columns in the correct order to ensure we are able to order them correctly.

Place value counters and dienes can help us to visualise the number in order to compare the amounts in each place value column more easily.

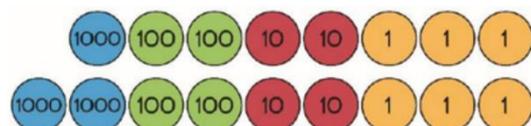
When you compare two or more numbers in size/value, you must always start by looking at the largest place value column. This is because, even if a number has let's say more ones than another it could still be smaller as it has a smaller amount of the more significant place value columns when looking at size, such as hundreds or thousands.

The simplest way to think of it is you want to know which number has the most so the biggest place value column is the most significant.

Speaking Frame

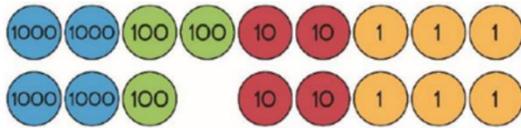
is **greater than/smaller than** because there are
 an **equal/greater/smaller** number of thousands.
 an **equal/greater/smaller** number of hundreds.
 an **equal/greater/smaller** number of hundreds and
 an **equal/greater/smaller** number of ones.

Example 1:



How can we tell which number is bigger?
 Well, without even looking at the rest of the place value columns, we can confidently say the bottom number is the biggest as it has more thousands.
 As digits, this would look like: 1,223 and 2,223. We know 2,223 is greater than 1,223 because there are a greater number of thousands.

Example 2:



This example is slightly different. We look at the biggest place value column, the thousands, and both numbers have an equal amount, two thousands. So, we must then compare the next biggest place value column, which is the hundreds. The top number has more therefore, the top number is greater.

As digits, this would look like: 2,223 and 2,123. We know 2,223 is greater than 2,123 because there are an equal number of thousands but 2,223 has a greater number of hundreds.

Example 3:

Order these numbers from greatest to smallest.

2,567 2,892 3,567 2,521

3,567 is the greatest as it is the only number with 3 thousands. Then as all the others have equal thousands, we need to look at the next significant place value column, the hundreds. 2,892 has the greatest amount of hundreds so that would be next in the order. 2,567 and 2,521 have the same amount of hundreds so we must check the tens column. 2,567 has a greater amount of tens so that would be the next greatest in the order. That leaves 2,521 as the smallest amount.

The order would be:

3,567 → 2,892 → 2,567 → 2,521

Independent Tasks

Please complete 1 or 2 challenges. If you are finding a challenge too tricky or too easy after 3 questions, you should switch challenges. After you have completed your challenge, check your answers against the mark scheme. If you got an answer wrong, look carefully and identify where you made a mistake.

Challenge 1

Copy out and circle the greatest number in each question.

- 1) 2,600 4,900 3,800 3,900
- 2) 5,980 2,260 7,820 2,261
- 3) 7,500 6,500 7,600 6,600
- 4) 6,002 5,784 4,867 6,302
- 5) 1,670 1,520 4,902 1,900
- 6) 8,765 8,950 6,320 8,000
- 7) 9,369 9,025 9,500 4,635
- 8) 4,852 6,852 6,635 4,853

Challenge 2

Copy the numbers in each question out, putting them in order from greatest to smallest.

- 1) 2,600 4,900 3,800 3,900
- 2) 5,980 2,260 7,820 2,261
- 3) 7,500 6,500 7,600 6,600
- 4) 6,002 5,784 4,867 6,302
- 5) 1,670 1,520 4,902 1,900
- 6) 8,765 8,950 6,320 8,000
- 7) 9,369 9,025 9,500 4,635
- 8) 4,852 6,852 6,635 4,853

Challenge 3

Copy the numbers in each question out, putting them in order from greatest to smallest.

- 1) 2,876 2,963 2,045 2,856
- 2) 6,973 9,973 9,974 6,974
- 3) 8,504 8,540 8,921 8,912
- 4) 7,888 7,666 6,777 6,787
- 5) 4,890 3,653 4,985 3,684
- 6) 3,030 3,300 3,003 3,303
- 7) 8,672 6,762 8,276 7,456
- 8) 4,786 682 7,321 7,123

Challenge X

What numbers HAVE to be in the gaps? Explain your answer.

Greatest 7,890 7,8__9 7,884 7,725 7,__99 7,624

Review

Order these numbers from smallest to greatest.

1,101	1,011
1,100	1,001



Mark Scheme – Lesson 2

Independent Tasks						
Challenge 1						
1)	2,600	4,900	3,800	3,900		
2)	5,980	2,260	7,820	2,261		
3)	7,500	6,500	7,600	6,600		
4)	6,002	5,784	4,867	6,302		
5)	1,670	1,520	4,902	1,900		
6)	8,765	8,950	6,320	8,000		
7)	9,369	9,025	9,500	4,635		
8)	4,852	6,852	6,635	4,853		
Challenge 2						
1)	4,900	3,900	3,800	2,600		
2)	7,820	5,980	2,261	2,260		
3)	7,600	7,500	6,600	6,500		
4)	6,302	6,002	5,784	4,867		
5)	4,902	1,900	1,670	1,520		
6)	8,950	8,765	8,000	6,320		
7)	9,500	9,369	9,025	4,635		
8)	6,852	6,635	4,853	4,852		
Challenge 3						
1)	2,963	2,876	2,856	2,045		
2)	9,974	9,973	6,974	6,973		
3)	8,921	8,912	8,540	8,504		
4)	7,888	7,666	6,787	6,777		
5)	4,985	4,890	3,684	3,653		
6)	3,303	3,300	3,030	3,003		
7)	8,672	8,276	7,456	6,762		
8)	7,321	7,123	4,786	682		
Challenge X						
Greatest	7,890	7,889	7,884	7,725	7,699	7,624
<p>The first has to be an 8 because if it were a 9, it would make the number larger than the greatest number and if it were a 7, it would be smaller than 7,884 which it needs to be bigger than.</p> <p>The second has to be a 6 because if it were a 7, it would make the number bigger than 7,725 but it has to be smaller than it and if it were a 5, it would make the number smaller than 7,624 which it needs to be bigger than.</p>						
Review						
1,101	1,100	1,011	1,001			

Lesson 3

<p><u>Learning Intention:</u></p> <p>WALT regroup numbers flexibly.</p>	<p><u>Key Vocabulary:</u></p> <p>Regroup – to split a number up into new groups that, when put back together again, would still make the original number.</p> <p>Exchanging – using place value knowledge to swap 10 of something for one of another or vice versa e.g. 2 tens can become 1 ten and ten ones or twenty ones.</p>	<p><u>What you will need:</u></p> <p>A computer, tablet or phone for the starter Maths book Pencil and ruler Video: Year 4 Maths lesson 3 WB 27.04.20</p>
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Starter

Log into Times Tables Rock Stars and complete a garage session.

Main Teaching

In today's lesson, we are going to use our knowledge of our number system to help us regroup numbers in many different ways (flexibly). Key ideas to remember:

<p>ten ones make a ten</p>	<p>ten tens make a hundred</p>	<p>ten hundreds make a thousand</p>

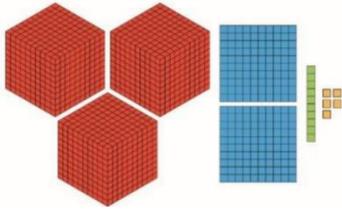
We can regroup numbers using exchanging to help us be more flexible. Keep referring to the key facts above to help you.

Example 1

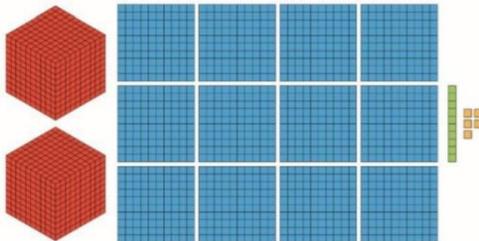
	<p>This number, represented by dienes, can be written in many ways.</p> <p>As it stands, we have 12 hundreds, 3 tens and 8 ones. We know that when we get ten of any place value type, it creates a new one of the next biggest place value type. Here we have 12 hundreds – this could make 1 thousand and 2 hundreds. Put the new 1 thousand and the 2 hundreds with the 3 tens and the 8 ones to get:</p>	
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We still have the same number (which was 1,238) but shown in different ways, through using exchanging and regrouping.

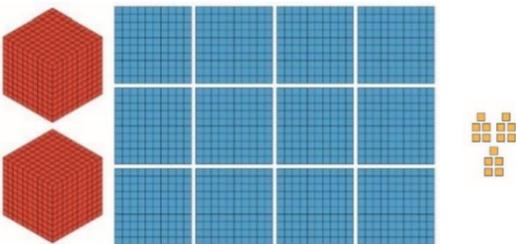
Example 2:



This number is 3,215. Using exchanging and our knowledge of how our number system works, we could regroup this in many different ways.



Here, we have 2 thousands, 12 hundreds, 1 ten and 5 ones. This number still makes 3,215 but we have exchanged a thousand for 10 hundreds to be able to represent it in a different way.

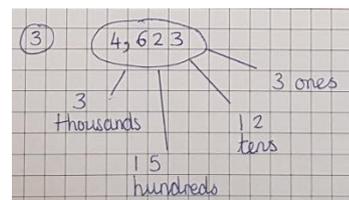
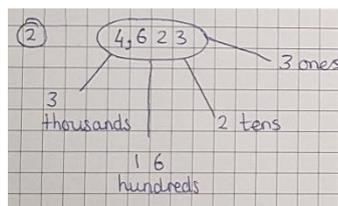
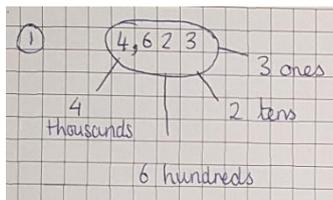


Here, we still have 3,215. This time we have 2 thousands, 12 hundreds and 15 ones. This time, we exchanged the thn for 10 ones to get our total of 15 ones.

2 thousands = 2 thousands
 12 hundreds = 1 thousand and 2 hundreds
 15 ones = 1 ten and 5 ones.

That means I have 3 thousands in total, 2 hundreds, 1 ten and 5 ones = 3,215.

Example 3: Find 3 different ways to represent 4,623 using regrouping.

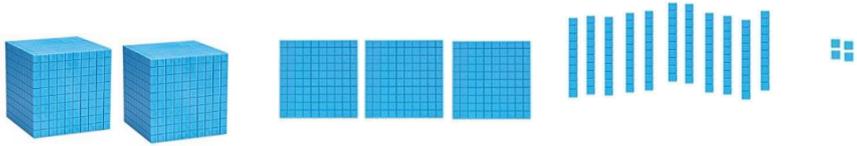


Independent Tasks

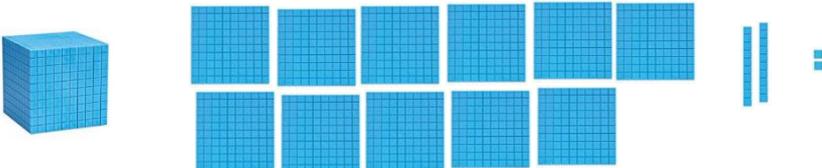
Please complete 1 or 2 challenges. If you are finding a challenge too tricky or too easy after 3 questions, you should switch challenges. After you have completed your challenge, check your answers against the mark scheme. If you got an answer wrong, look carefully and identify where you made a mistake.

Challenge 1

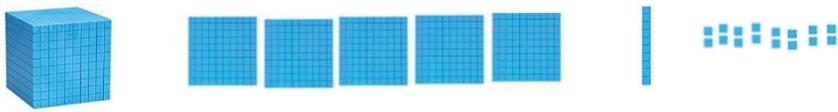
Look at the 8 images of numbers below. Record the four-digit numbers you think they represent. Look carefully as if you have more than 10 one/tens/hundreds, they will make a new ten/hundred/thousand.

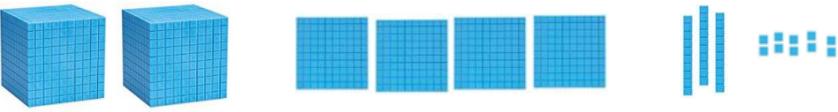
1) 

2) 

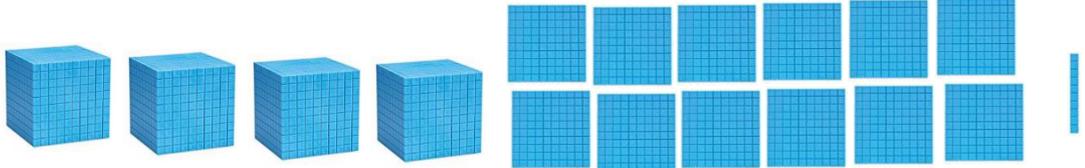
3) 

4) 

5) 

6) 

7) 

8) 



Challenge 2

For the 8 questions below, fill in the gap to complete how the number has been regrouped.

- 1) $5,692 = 5 \text{ thousands } 5 \text{ hundreds } \underline{\hspace{1cm}} \text{ tens and } 2 \text{ ones}$
- 2) $6,213 = 5 \text{ thousands } \underline{\hspace{1cm}} \text{ hundreds } 1 \text{ ten and } 3 \text{ ones}$
- 3) $9,945 = 9 \text{ thousands } 9 \text{ hundreds } \underline{\hspace{1cm}} \text{ tens and } 15 \text{ ones}$
- 4) $7,821 = 7 \text{ thousands } 8 \text{ hundreds } 1 \text{ ten and } \underline{\hspace{1cm}} \text{ ones}$
- 5) $4,853 = \underline{\hspace{1cm}} \text{ thousands } 18 \text{ hundreds } 5 \text{ tens and } 3 \text{ ones}$
- 6) $1,782 = \underline{\hspace{1cm}} \text{ hundreds } 8 \text{ tens and } 2 \text{ ones}$
- 7) $3,706 = \underline{\hspace{1cm}} \text{ thousands } 17 \text{ hundreds } 0 \text{ tens and } 6 \text{ ones}$
- 8) $9,654 = 9 \text{ thousands } 5 \text{ hundreds } \underline{\hspace{1cm}} \text{ tens and } 14 \text{ ones}$

Challenge 3

For the 8 questions below, fill in the gap to complete how the number has been regrouped.

- 1) $9,246 = 7 \text{ thousands } 22 \text{ hundreds } 3 \text{ tens and } \underline{\hspace{1cm}} \text{ ones}$
- 2) $2,304 = 2 \text{ thousands } 1 \text{ hundred } \underline{\hspace{1cm}} \text{ tens and } 4 \text{ ones}$
- 3) $7,987 = \underline{\hspace{1cm}} \text{ thousands } 39 \text{ hundreds } 7 \text{ tens and } \underline{\hspace{1cm}} \text{ ones}$
- 4) $4,675 = 4 \text{ thousands } 6 \text{ hundreds } 0 \text{ tens and } \underline{\hspace{1cm}} \text{ ones}$
- 5) $3,004 = 1 \text{ thousand } 19 \text{ hundreds } \underline{\hspace{1cm}} \text{ tens and } 4 \text{ ones}$
- 6) $4,982 = \underline{\hspace{1cm}} \text{ hundreds } 7 \text{ tens and } \underline{\hspace{1cm}} \text{ ones}$
- 7) $2,698 = 2 \text{ thousands } 5 \text{ hundreds } \underline{\hspace{1cm}} \text{ tens and } 18 \text{ ones}$
- 8) $4,560 = 3 \text{ thousands } \underline{\hspace{1cm}} \text{ hundreds } 16 \text{ tens and } 0 \text{ ones}$

Challenge X

I am a four-digit whole number. Two of my digits are equal. The sum of my digits is 26. All of my digits are odd. My hundreds digit is four more than my ones digit.'

Review

I have £2,893 in my bank account. I withdraw it all in cash. The banker gives me: 288 ten pound notes and 3 pound coins. Have I got the correct amount of money?



Mark Scheme – Lesson 3

<u>Independent Tasks</u>
<u>Challenge 1</u>
1) 2,414 2) 3,172 3) 2,122 4) 1,236 5) 1,526 6) 2,440 7) 1,242 8) 5,210
<u>Challenge 2</u>
1) 5,692 = 5 thousands 5 hundreds 19 tens and 2 ones 2) 6,213 = 6 thousands 2 hundreds 1 ten and 3 ones 3) 9,945 = 9 thousands 9 hundreds 3 tens and 15 ones 4) 7,821 = 7 thousands 8 hundreds 1 ten and 11 ones 5) 4,853 = 4 thousands 8 hundreds 5 tens and 3 ones 6) 1,782 = 1 thousand 7 hundreds 8 tens and 2 ones 7) 3,706 = 3 thousands 7 hundreds 0 tens and 6 ones 8) 9,654 = 9 thousands 6 hundreds 5 tens and 4 ones
<u>Challenge 3</u>
1) 9,246 = 9 thousands 2 hundreds 4 tens and 6 ones 2) 2,304 = 2 thousands 3 hundreds 0 tens and 4 ones 3) 7,987 = 7 thousands 9 hundreds 8 tens and 7 ones 4) 4,675 = 4 thousands 6 hundreds 7 tens and 5 ones 5) 3,004 = 3 thousands 0 hundreds 0 tens and 4 ones 6) 4,982 = 4 thousands 9 hundreds 8 tens and 2 ones 7) 2,698 = 2 thousands 6 hundreds 9 tens and 8 ones 8) 4,560 = 4 thousands 5 hundreds 6 tens and 0 ones
<u>Challenge X</u>
Any of the below answers: 3,995 9,935 7,955 5,975 9,773 7,793
<u>Review</u>
I do not have the correct amount of money. I only have £2883 not £2893. I either need another ten pound note or ten more pound coins.

Lesson 4		
Learning Intention: WALT estimate number magnitude.	Key Vocabulary: Magnitude – the size of a number Benchmark number – a number against which other numbers can be compared or estimated	What you will need: A computer, tablet or phone for the starter Maths book Pencil and ruler Video: Year 4 Maths lesson 4 WB 27.04.20
Starter		
Log into Times Tables Rock Stars and complete a studio session.		
Main Teaching		
<p>Today's lesson will be looking at number magnitude and applying our place value knowledge to plot numbers on an almost blank number line. To help you be more accurate with your plotting, you will need to find, mark and use benchmark numbers. Benchmark numbers are usually the halfway point, quarter way point and three quarter way point. This is because we can work these out quickly using our halving skills and know that they are accurate numbers.</p> <p>Top tip – You must check whether your number line starts at 0 before going straight into halving!</p> <p><u>Example 1</u> Plot 30cm and 65cm on this number line.</p> <p>Step 1 - We would need to find the halfway point. As our number line starts at 0, we know the length of it is equal to 100cm. Half of 100cm is 50cm. We can therefore plot 50cm on the line as accurately as possible as the halfway point.</p> <p>Step 2 - We look just at the first half of the number line. If we half that length again (half 50cm) we would get the quarter way point. Remember, half of a half is a quarter. Half of 50cm is 25cm so our quarter way point is 25cm.</p> <p>Step 3 - We work out our three quarter way point. We know that three lots of one quarter makes three quarters or a half plus a quarter makes three quarters. Using this knowledge, we can either do $25\text{cm} \times 3 = 75\text{cm}$ OR $25\text{cm} + 25\text{cm} + 25\text{cm} = 75\text{cm}$ OR $50\text{cm} + 25\text{cm} = 75\text{cm}$. We can clearly see that our three quarter way point is 75cm.</p> <p>Step 4 – It's now a lot easier to place 30cm and 65cm in the correct spot as we have a more limited area that they could go in. Remember – each gap would fit 25 numbers in so make sure you place your numbers somewhere that allows the rest of the numbers for that gap to fit around it!</p>		

Example 2

What could my mystery numbers be?

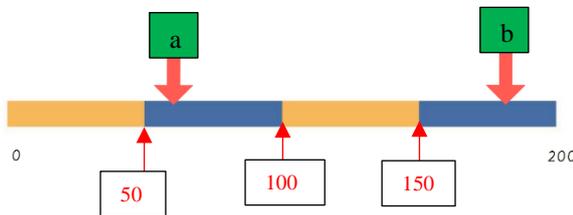


As this number line also starts at 0, we need to follow the same first three steps that we saw in Example 1.

Step 1 – Find the halfway point. Half of 200 ($200 \div 2$) is 100. The halfway point is 100.

Step 2 – Find the quarter way point. Half of 100 ($100 \div 2$) is 50. The quarter way point is 50.

Step 3 – Find the three quarter way point. $100 + 50$ OR 50×3 is 150. The three quarter way point is 150.



Step 4 - We can now have a closer estimate at the magnitude of the mystery numbers.

When estimating, remember that each quarter has to fit 50 numbers in!

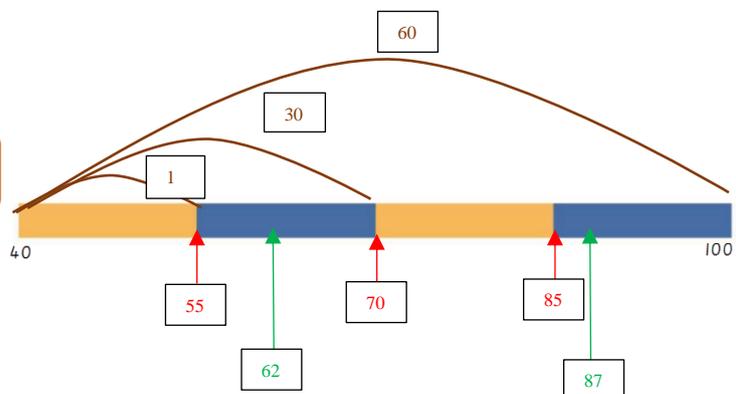
$a = 60$ (anywhere between 58-65 would be okay)

$b = 180$ (anywhere between 178-185 would be okay)

Example 3

Plot 62 and 87 on this number line.

bigger number – smaller number = the difference



WARNING – This number line does not start at 0. This means the number line is not worth 100 and we need to work out the value of this section of the number line first. To do that, we need to find the difference between the two amounts at either end. $100 - 40 = 60$. The value of this section of number line is 60. We can now go back to the steps from previous examples.

Step 1 - Half of 60 is 30. We can now plot the halfway point by adding 30 to where the line starts. $40 + 30 = 70$. Halfway is 70.

Step 2 – Half of 30 is 15. We can now plot the quarter way point by adding 15 to where the line starts. $40 + 15 = 55$. A quarter of the way is 55.

Step 3 – The three quarter point is three lots of 15 added to 40. So $3 \times 15 = 45$ then $40 + 45 = 85$. Three quarters of the way is 85.

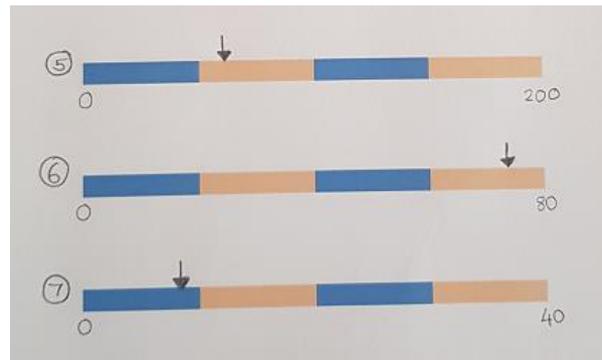
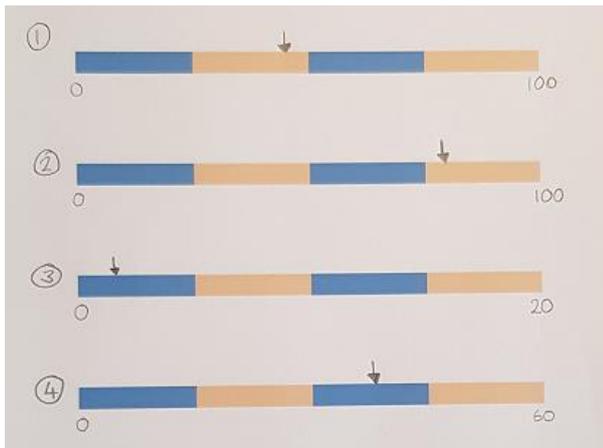
Step 4 – Plot 62 and 87, remembering that each section has 15 numbers in!

Independent Tasks

Please complete 1 or 2 challenges. If you are finding a challenge too tricky or too easy after 3 questions, you should switch challenges. After you have completed your challenge, check your answers against the mark scheme. If you got an answer wrong, look carefully and identify where you made a mistake.

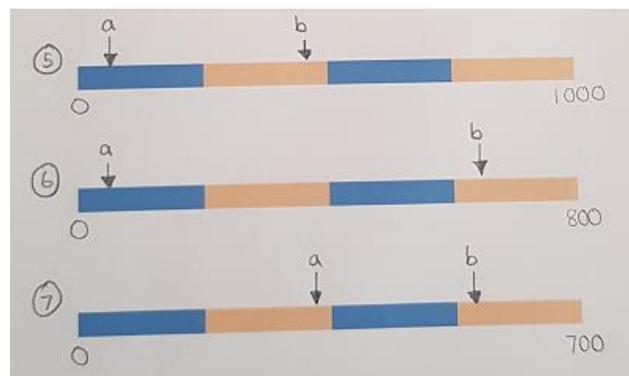
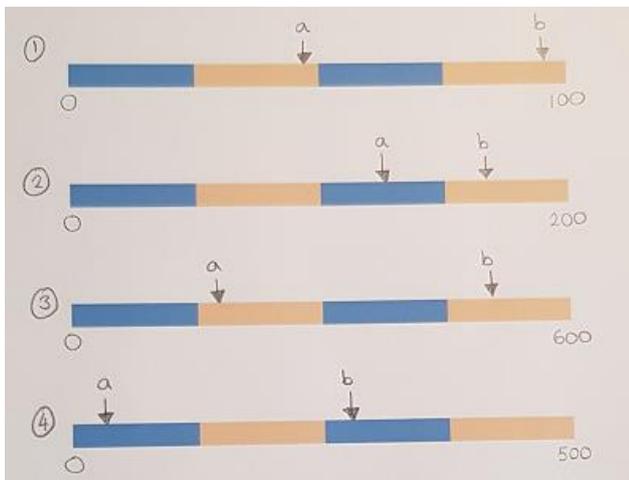
Challenge 1

Look at the number lines below. Using the steps in examples 1 and 2, tell me what number you think the arrow is pointing to.



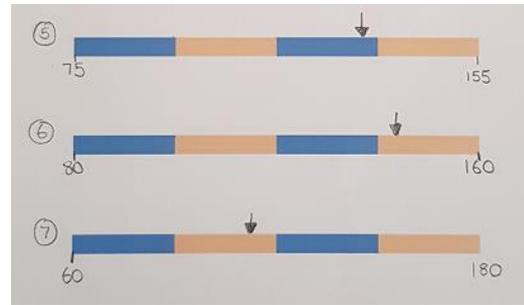
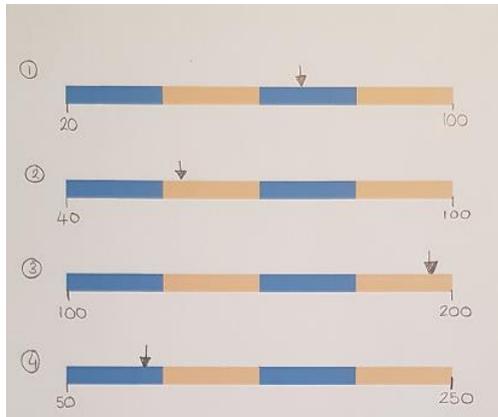
Challenge 2

Look at the number lines below. Using the steps in examples 1 and 2, tell me what numbers you think the arrows are pointing to.



Challenge 3

Look at the number lines below. Using the steps in example 3, tell me what number you think the arrow is pointing to.



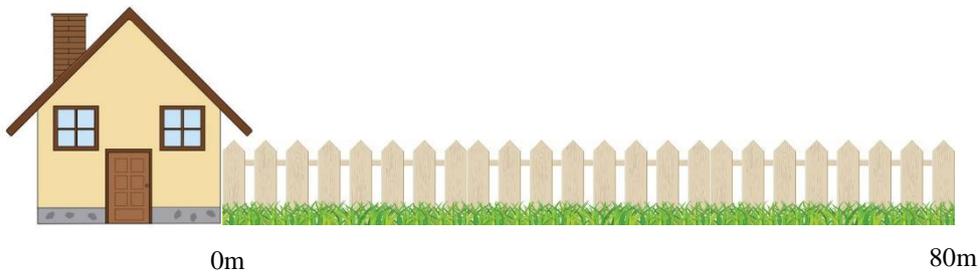
Challenge X

Show the position of 4100 on this number line.



Review

This is my garden fence. It is 80m long. I want a hanging basket of flowers at 25m and 65m. Where would they go?

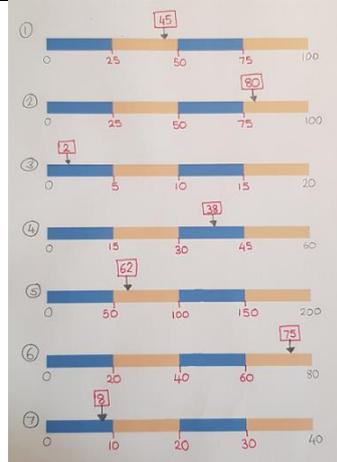


Mark Scheme – Lesson 4

Independent Tasks

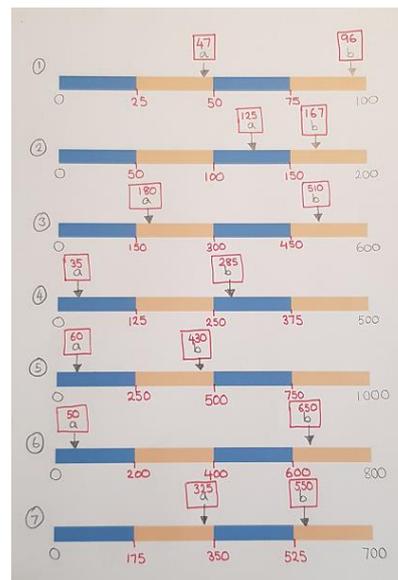
Challenge 1

1. anywhere between 40-47
2. anywhere between 77-83
3. anywhere between 1-2
4. anywhere between 37-39
5. anywhere between 60-65
6. anywhere between 73-77
7. anywhere between 7-8



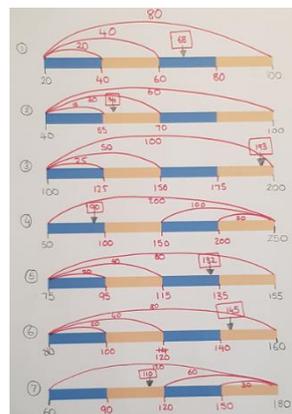
Challenge 2

1. a) anywhere between 45-48
b) anywhere between 92-97
2. a) anywhere between 120-130
b) anywhere between 160-170
3. a) anywhere between 170-190
b) anywhere between 500-520
4. a) anywhere between 30-40
b) anywhere between 280-290
5. a) anywhere between 40-70
b) anywhere between 415-445
6. a) anywhere between 40-60
b) anywhere between 640-660
7. a) anywhere between 310-330
b) anywhere between 540-560



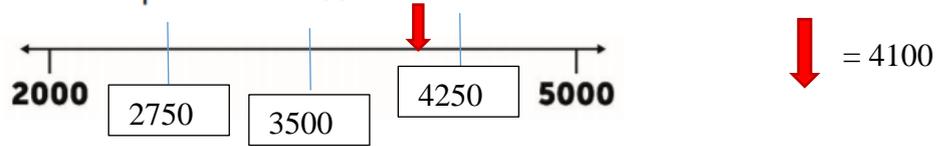
Challenge 3

1. anywhere between 67-69
2. anywhere between 52-54
3. anywhere between 190-195
4. anywhere between 85-95
5. anywhere between 130-133
6. anywhere between 142-147
7. anywhere between 105-115

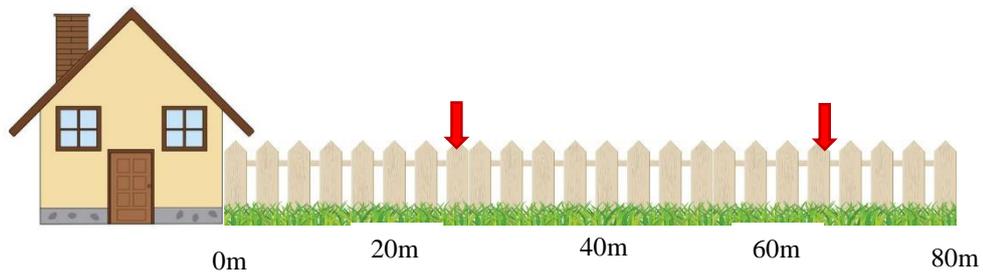


Challenge X

Show the position of 4100 on this number line.



Review



Lesson 5

<p>Learning Intention:</p> <p>WALT round numbers to the nearest ten, hundred and thousand.</p>	<p>Key Vocabulary:</p> <p>Multiple – a number that can be divided by another number, without leaving a remainder.</p>	<p>What you will need:</p> <p>What you will need: A computer, tablet or phone for the starter Maths book Pencil and ruler Video: Year 4 Maths lesson 5 WB 27.04.20</p>
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Starter

Log into Times Tables Rock Stars and complete a garage session.

Main Teaching

Today, we are going to be looking at rounding numbers to the nearest ten, hundred and thousand. You will need to apply your knowledge of place value that you've looked at previously this week as well as your knowledge of multiples of ten, a hundred and a thousand.

Multiples of ten	Multiples of a hundred	Multiples of a thousand
<p>These are divisible by 10. To be a multiple of 10, the number must end in at least one zero, therefore having no ones. It may sometimes have no tens or hundreds and just thousands.</p>	<p>These are divisible by 100. To be a multiple of 100, the number must end in at least two zeros, therefore having no ones or tens. It may sometimes have no hundreds too and just thousands.</p>	<p>These are divisible by 1000. To be a multiple of 1000, the number must end in at least three zeros, therefore having no ones, tens or hundreds.</p>

Rounding rules to remember:
Numbers are lazy – they like to go to the **CLOSEST** multiple possible!

Round down:
1, 2, 3 and 4

Round up:
5, 6, 7, 8 and 9

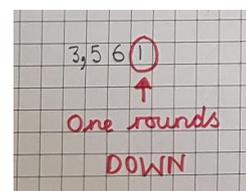
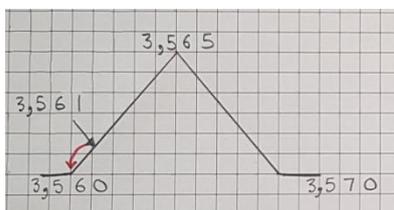
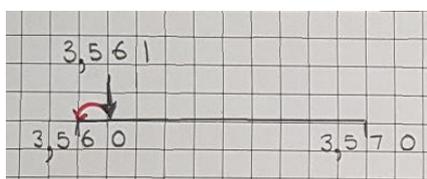
Example 1:
Round 3,561 to the nearest ten.

Your first step is to decide what the two multiples of ten are either side of your number. Think of counting in tens to help you. What 'ten' would you get after 61 ... 70. So what multiple of ten would you get after 3,561... 3,570. Therefore, what would be the multiple of ten be before 3,561... 3,560.

Then, your ones are the significant column as they will decide whether you round up or down. 3,561 has a 1 in the ones column. We know 1 rounds down therefore 3,561 would round to 3,560 when rounded to the nearest ten. We would write this as:

$$3,561 \approx 3,560$$

Drawing a number line or a rounding mountain will help you with visualising which way the number would round as it goes to the CLOSEST multiple.



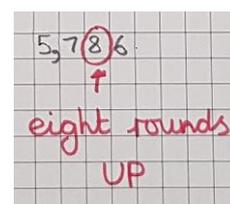
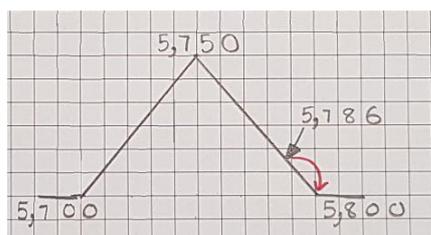
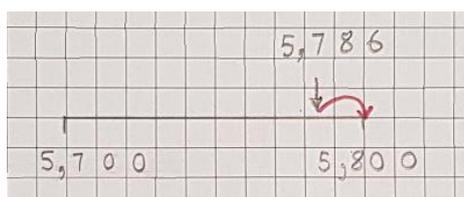
Example 2:
Round 5,786 to the nearest hundred.

Your first step is to decide what the two multiples of a hundred are either side of your number. Think of counting in hundreds to help you. What 'hundred' would you get after 786 ... 800. So what multiple of a hundred would you get after 5,786... 5,800. Therefore, what would be the multiple of a hundred be before 5,786...5,700.

Then, your tens are the significant column as they will decide whether you round up or down. 5,786 has an 8 in the tens column. We know 8 rounds up therefore 5,786 would round to 5,800 when rounded to the nearest hundred. We would write this as:

$$5,786 \approx 5,800$$

Drawing a number line or a rounding mountain will help you with visualising which way the number would round as it goes to the CLOSEST multiple.



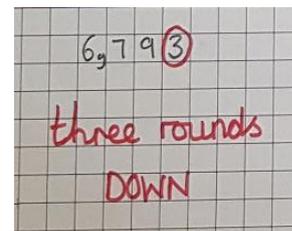
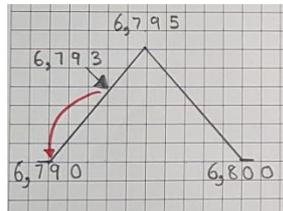
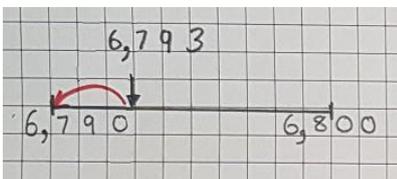
Example 3:

Round 6,793 to the nearest ten, hundred and thousand.

Your first step is to decide what the two multiples of ten are either side of your number. Think of counting in tens to help you. What 'ten' would you get after 93 ... 100. This becomes a little harder as you have a multiple of a hundred as your multiple of 10. So what multiple of ten would you get after 6,793... 6,800. Therefore, what would be the multiple of ten be before 6,793... 6,790.

Then, your ones are the significant column as they will decide whether you round up or down. 6,793 has a 3 in the ones column. We know 3 rounds down therefore 6,793 would round to 6,790 when rounded to the nearest ten. We would write this as:

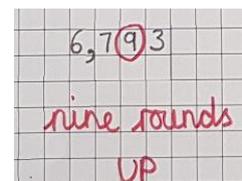
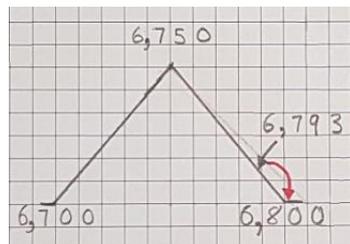
6,793 ≈ 6,790



Your next step is to decide what the two multiples of a hundred are either side of your number. Think of counting in hundreds to help you. What 'hundred' would you get after 793... 800. So what multiple of a hundred would you get after 6,793...6,800. Therefore, what would be the multiple of a hundred be before 6,793...6,700.

Then, your tens are the significant column as they will decide whether you round up or down. 6,793 has a 9 in the tens column. We know 9 rounds up therefore 6,793 would round to 6,800 when rounded to the nearest hundred. We would write this as:

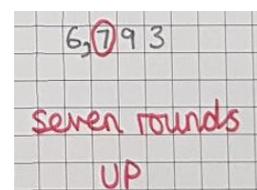
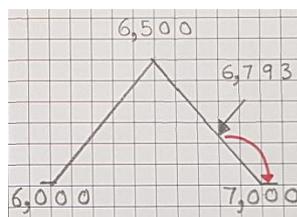
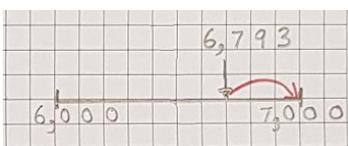
6,793 ≈ 6,800



Your final step is to decide what the two multiples of a thousand are either side of your number. Think of counting in thousands to help you. What 'thousand' would you get after 6,793... 7,000. So what multiple of a thousand would you get after 6,793...7,000. Therefore, what would be the multiple of a thousand be before 6,793...6,000.

Then, your hundreds are the significant column as they will decide whether you round up or down. 6,793 has a 7 in the hundreds column. We know 7 rounds up therefore 6,793 would round to 7,000 when rounded to the nearest thousand. We would write this as:

6,793 ≈ 7,000



Independent Tasks

Please complete 1 or 2 challenges. If you are finding a challenge too tricky or too easy after 3 questions, you should switch challenges. After you have completed your challenge, check your answers against the mark scheme. If you got an answer wrong, look carefully and identify where you made a mistake.

Challenge 1

Copy out and complete the number lines below. Then write the number sentence which shows the number you have chosen to round to. Make sure you use the approximate symbol \approx in your number sentence.

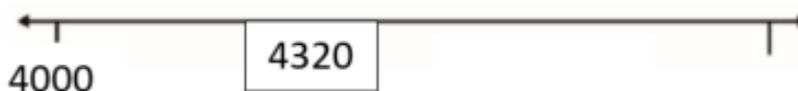
Round to the nearest ten:



Round to the nearest hundred:



Round to the nearest thousand:



Challenge 2

Draw a number line or rounding mountain for each question below. Complete the ends with the two possible rounding numbers and then plot your number. Complete a number sentence to show which number you have chosen to round to. Make sure you use the approximate symbol \approx in your number sentence.

Round to the nearest ten:

1. 46
2. 271
3. 859

Round to the nearest hundred:

4. 356
5. 624
6. 1,830

Round to the nearest thousand:

7. 4,125
8. 8,567
9. 7,620

Challenge 3

Round each of these numbers to the nearest ten, hundred and thousand. You will need to draw three number lines/mountains for each number (one for rounding to 10, one for rounding to 100 and one for rounding to 1000). You also need a number sentence for each time you have rounded. Make sure you use the approximate symbol \approx in your number sentence.

1. 1,456
2. 5,781
3. 8,942
4. 3,234

Challenge X

Circle the numbers that will round to 3000 if rounded to nearest thousand.

3010 3801 3499 2501

Review

I am trying to work out how much money I have, roughly. Estimating is a good way to do this. Round to the nearest hundred and find my total.

In my bank: £7,763

At home in my savings pot: £1,245



Mark Scheme – Lesson 5

Independent Tasks	
Challenge 1	
1) $27 \approx 30$ 2) $53 \approx 50$ 3) $340 \approx 300$ 4) $1,850 \approx 1,900$ 5) $2,680 \approx 2,700$ 6) $4,320 \approx 4,000$ Plus, a copy of the number lines drawn and completed.	
Challenge 2	
Round to the nearest ten: 1) $46 \approx 50$ 2) $271 \approx 270$ 3) $859 \approx 860$ Round to the nearest hundred: 4) $356 \approx 400$ 5) $624 \approx 600$ 6) $1,830 \approx 1,800$ Round to the nearest thousand: 7) $4,125 \approx 4,000$ 8) $8,567 \approx 9,000$ 9) $7,620 \approx 8,000$ Plus, an attempt of either a number line or rounding mountain for each question.	
Challenge 3	
1. 1,456 a) $1,456 \approx 1,460$ b) $1,456 \approx 1,500$ c) $1,456 \approx 1,000$	3. 8,942 a) $8,942 \approx 8,940$ b) $8,942 \approx 8,900$ c) $8,942 \approx 9,000$
2. 5,781 a) $5,781 \approx 5,780$ b) $5,781 \approx 5,800$ c) $5,781 \approx 6,000$	4. 3,234 a) $3,234 \approx 3,230$ b) $3,234 \approx 3,200$ c) $3,234 \approx 3,000$
Plus, an attempt of either a number line or rounding mountain for each question.	
Challenge X	
Numbers circled should be: 3,010 3,801 2,501	



Review

$£7,763 \approx £7,800$

$£1,245 \approx £1,200$

$£1,200 + £7,800 = £9,000.$