Decimals

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**

National Curriculum Statement:

Identify the value of each digit in numbers given to three decimal places and multiply numbers by 10, 100 and 1000 giving answers up to 3dp.

Fluency:

- What is the value of the underlined digit in the following numbers?

  3.4<u>2</u>   4.56<u>2</u>   34.6<u>2</u>1   54.3<u>6</u>

- Fill in the table.

	X10	X100	X1000
0.1			
3.42			
5.36			
1.872			

- Find the value of the ▲ in each statement.

  $0.5 \times ▲ = 500$

  $37.2 \div 100 = ▲$

  $8.4 \div ▲ = 0.084$

Reasoning:

- Ali says,

  "To multiply by 100, you should add two zeros."

  Do you agree with Ali? Explain your thinking.

- **True or False?**
  In all of the numbers below, the digit 6 is worth more than 6 hundredths.

  3.6 3.063 3.006 6.23 7.761

  If it is false, can you change some of the numbers so it is true?

- Kayleigh says;

  "The more decimal places a number has, the smaller the number is."

  Do you agree? Explain why.

Problem Solving:

- Four children are thinking of four different numbers.

  3.454   4.445
  4.345   3.54

  Yvonne: "*My number has four hundredths.*"

  Alex: "*My number has the same amount of ones, tenths and hundredths.*"

  Louise: "*My number has more tenths and hundredths than ones.*"

  Emily: "*My number has 2 decimal places.*"

  Can you match each number to the correct child?

MathsHUBS
White Rose

Term by Term Objectives

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Place Value Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.	• Which is greater? Seventy six thousand, eight hundred and twenty six or 78626 • Write the following number in words: 23650118 • Put a number in the missing space below to make the sentence correct. 4_236460 > 46236460	• Put a number in the missing space below to make the sentence correct. 4_236460 > 46236460 Explain why it is true. • **Do, then explain** Show the value of the digit 6 in these numbers? 6787555 95467754 Explain how you know. • Put one number in each box so that the list of numbers is ordered largest to smallest.	• **Do, then explain** Find out the populations in five countries. Order the populations starting with the largest. Explain how you ordered the countries and their populations. • Miss Jones, the teacher has four cards. On each card is a number:

42350	43685
56995	56943

She gives one card to each pupil. They each look at them and say a clue.
Alfie says, "My number is 57000 when rounded to the nearest 10."
Ben says "My number has exactly 3 hundreds in it."
Caleb says "My number is 44000 when rounded to the nearest thousand".
Patrick says "My number is exactly 100 less than 57043."
Can you solve who had which card and explain how you know this?

• Claire is given the calculation below to estimate an answer to
1912 + 1888 =
Claire says "I will just double 1900 which is 3800".
Why has Claire done that? Would you do anything differently?

Reasoning table (Put one number in each box):

1	1		3	
1		2		4
1	2	5		
1		5		6
1	3	0		
1		1	5	

MathsHUBS
White Rose

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Place Value Use negative numbers in context, and calculate intervals across zero.	• Fill in the missing numbers. 152, 102, 52, 2, ___, ___, • Filip had £17.50 in bank account. He paid for a jumper that was £30. How much did he have in his bank account after? • In a Science experiment, a class videoed a thermometer overnight. At 02:30 it read -12°c and it was 15°c at 13:00. What was the difference in temperatures?	• **Spot the mistake:** -75, -15, 35, 105 What is wrong with this sequence of numbers? • **True or false?** When I count backwards in 50s from 10 I will say -150. Explain how you know. • A company decided to build offices underground as well as over ground. The manager says "If we build from 100 down to -100 then we will have 200 floors." Was he right? Convince me.	• The temperature is -6°c. It gets 5 degrees warmer. **True or false** – it is now -11°c. Explain your answer using a drawing e.g. number line. • Here are some number cards: 	3	-8	-6
---	---	---
-4	2	-7 | Use the cards to complete the calculations below. ___ + ___ = ___ ___ - ___ = ___ • **Connect 3** The first to complete a row of three is the winner. Each time a player rolls they then choose if they would like to add or subtract the numbers either way round: ___ +/- ___ = |	-5	-4	-3	-2
---	---	---	---	---
-1	0	1	2	3
4	5	6	7	8
9	10	11	12		

Term by Term Objectives

Year 6

National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Four Operations — Identify common factors, common multiples and prime numbers.	• List the first 5 multiples of 7 • Write down all the factors of 24 • What is the highest common factor of 24 and 36?	• Stefi says "The only prime number between 30 and 40 is 37". Is he correct? Prove it. • Explain why a multiple of 80 is also a multiple of 8. • Amber works out the HCF of 6 and 8. Here is her working out: 6: 6, 12, 18, **24**, 32, 40 8: 8, 16, **24**, 32, 50 The HCF is 24. Is she correct? How do you know?	• Nancy is double her sister's age. They are both older than 20 and younger than 50. They are both multiples of 7. How old are they? • Clare's age is a multiple of 7 and 3 less than a multiple of 8. How old is Clare? • Which number is the odd one out? Explain why. 12, 30, 54, 42, 32, 48

MathsHUBS
White Rose