Quick Start Maths meeting

Year 5 and Year 6

January 2023

At Whinmoor St Paul's we believe that Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world.

It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real life problems. It also provides the materials and means for creating new imaginative worlds to explore.

At Whinmoor St Paul's we follow a 'mastery' approach in teaching mathematics.

<u>What does this mean and why do we use this?</u>

Mastering maths means pupils acquiring a deep, long term, secure and adaptable understanding of the subject. The phrase 'teaching for mastery' describes the elements of classroom practice and school organisation that combine to give pupils the best chances of mastering maths.

Achieving mastery means acquiring a solid enough understanding of the maths that's been taught to enable pupils to move on to more advanced material.
'NCTEM'

To ensure that we have a well rounded mastery approach this is built on the three aims of the Primary Maths Curriculum which are at the heart of everything we do, these are:

- Fluency in the fundamentals of mathematics so that pupils develop conceptual understanding, and the ability to recall and apply knowledge rapidly and accurately.

- Reasoning mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.

- Problem Solving by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

When children have demonstrated that they have a solid understanding of fluency within a lesson, they should be moving to appropriate challenge through reasoning and problem solving.

Each lesson is carefully sequenced to build systematically on previous learning and lead to the next step in understanding for future lessons.

WHINMOOR ST. PAUL'S C of E Primary School

Year 5 Maths Long Term Plan

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
Autumn	Place value			Addition and subtraction		Multiplication and division			Fractions						
Spring	Multiplication and Division			Fractions		Decimals and Percentages			Perimeter and Area		Statistics				
Summer	Shape			Position and direction		Decimals			Negative numbers	Converting units		Volume			

WHINMOOR ST. PAUL'S C of E Primary School

Year 6 Maths Long Term Plan

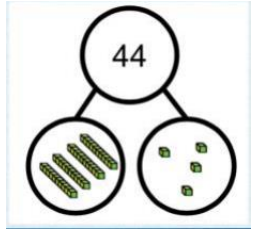
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
Autumn	Place value		Four operations					Fractions				Converting units			
Spring	Ratio		Algebra			Decimals		Fractions Decimals Percentages		Area Perimeter and Volume		Statistics			
Summer	Shape				Position and directions	Themed projects, consolidation and problem solving									

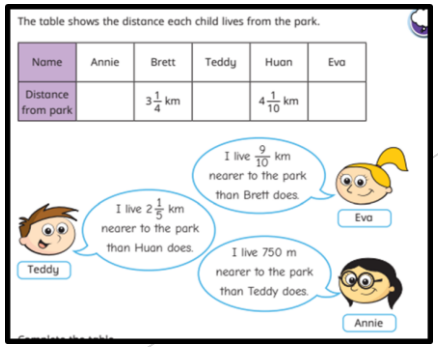
In our lessons, we are teaching with a specific focus of fluency. For our fluency activities we use White Rose Maths Hub and Maths Shed.

We start each morning with a fluency lesson, this is then incorporated into our maths lessons using tasks taken from White Rose Maths Hub.

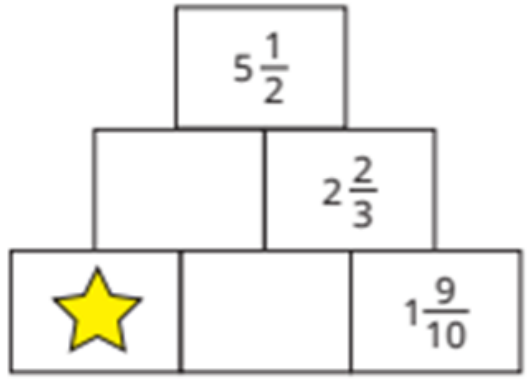
This is followed by an hour long maths lesson- with questions that are based around these three areas.

1. Concrete
2. Pictorial
3. Abstract





In this addition pyramid, each number is the sum of the two numbers below it.



Work out the value of the star.

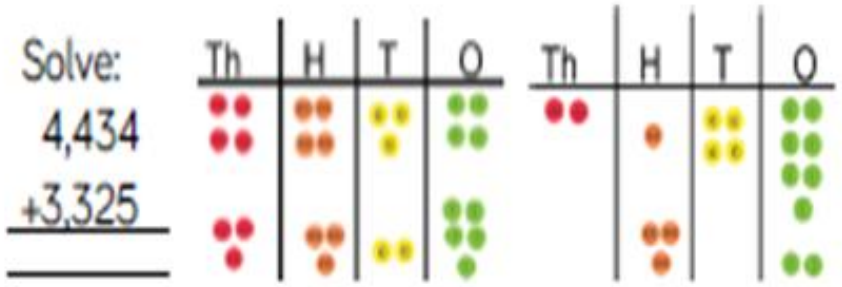
How would we be able to solve this?

What methods have we previously been taught to help us solve this question from previous years?

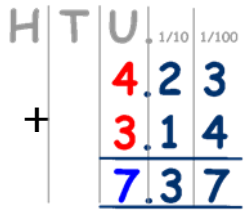
Addition

Written methods (progressing to more than 4-digits)

Following on from Year 4, we are progressing our understanding of the expanded method to ensure this is secure, children will move on to the formal column method for whole numbers and decimal numbers as an efficient written algorithm.



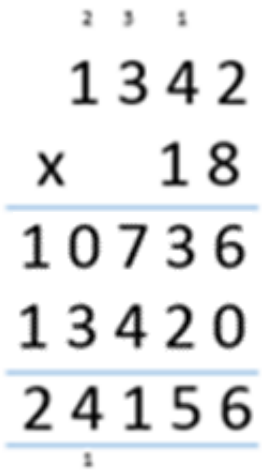
As the children move on, introduce decimals with the same number of decimal places and different. Money can be used here.



Multiplication and division

Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written method of long multiplication.
Start with long multiplication, reminding the children about lining up their numbers clearly in columns.

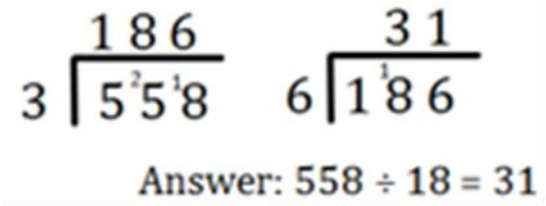
Compact Vertical Method for multiplication

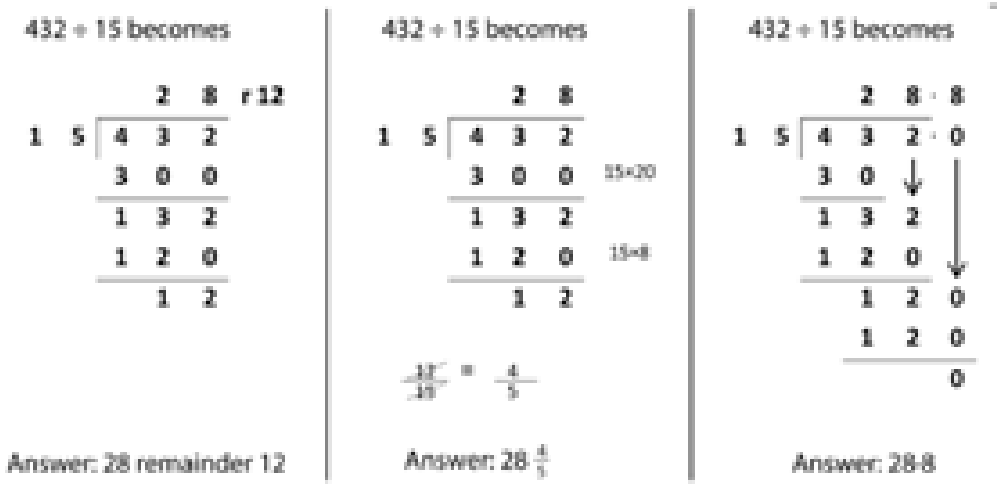


Expanded vertical

47
x 36
42 (6x7)
240 (6x40)
210 (30x7)
1200 (30x40)
1692

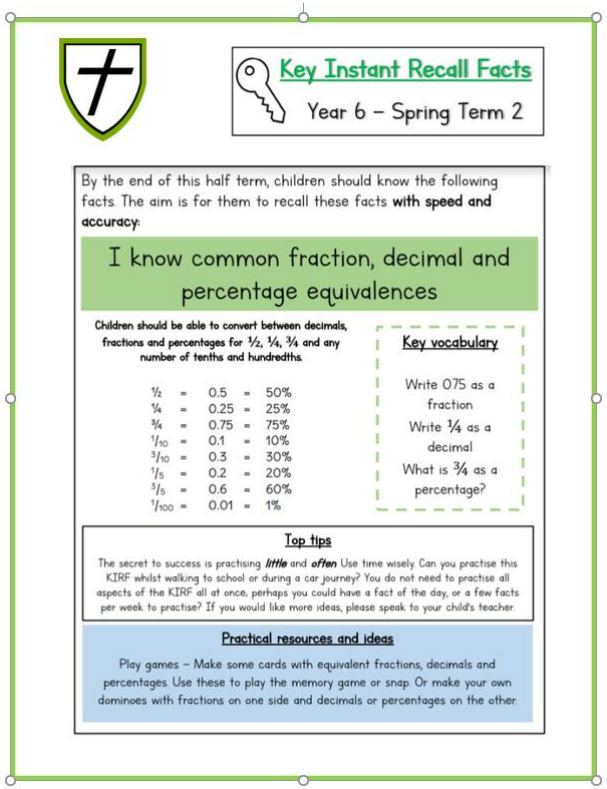
Sharing and Grouping and using a number line.
Children will continue to explore division as sharing and grouping, and to represent calculations on a number line as appropriate.
Remainders should be expressed as decimals and fractions in Year 6.





Homework is an extension of the curriculum we provide in school.

It allows children to secure key knowledge and develop skills we are teaching in school.



Key Instant Recall Facts
Year 6 – Spring Term 2

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **with speed and accuracy**:

I know common fraction, decimal and percentage equivalences

Children should be able to convert between decimals, fractions and percentages for ½, ¼, ¾ and any number of tenths and hundredths.

½	=	0.5	= 50%
¼	=	0.25	= 25%
¾	=	0.75	= 75%
1/10	=	0.1	= 10%
3/10	=	0.3	= 30%
1/5	=	0.2	= 20%
3/5	=	0.6	= 60%
1/100	=	0.01	= 1%

Key vocabulary

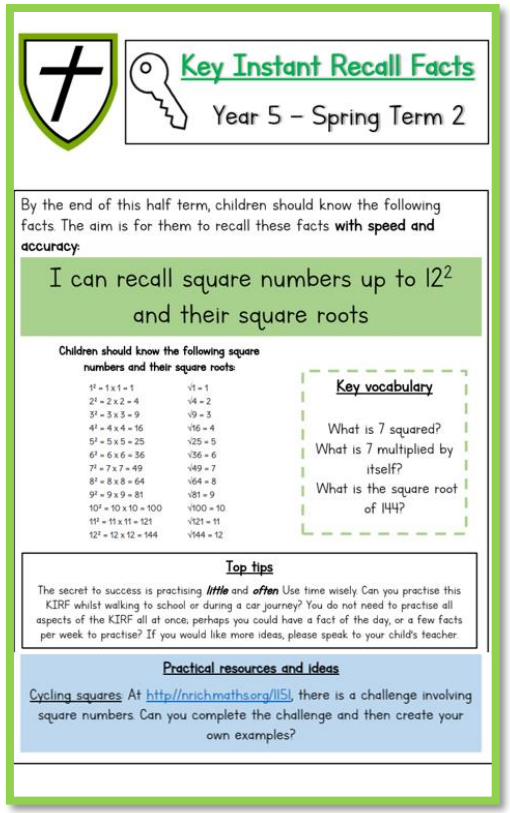
Write 0.75 as a fraction
Write ¼ as a decimal
What is ¾ as a percentage?

Top tips

The secret to success is practising ***little*** and ***often*** Use time wisely. Can you practise this KIRF whilst walking to school or during a car journey? You do not need to practise all aspects of the KIRF all at once, perhaps you could have a fact of the day, or a few facts per week to practise? If you would like more ideas, please speak to your child's teacher.

Practical resources and ideas

Play games – Make some cards with equivalent fractions, decimals and percentages. Use these to play the memory game or snap. Or make your own dominoes with fractions on one side and decimals or percentages on the other.



Key Instant Recall Facts
Year 5 – Spring Term 2

By the end of this half term, children should know the following facts. The aim is for them to recall these facts **with speed and accuracy**:

I can recall square numbers up to 12^2 and their square roots

Children should know the following square numbers and their square roots:

$1^2 = 1 \times 1 = 1$	$\sqrt{1} = 1$
$2^2 = 2 \times 2 = 4$	$\sqrt{4} = 2$
$3^2 = 3 \times 3 = 9$	$\sqrt{9} = 3$
$4^2 = 4 \times 4 = 16$	$\sqrt{16} = 4$
$5^2 = 5 \times 5 = 25$	$\sqrt{25} = 5$
$6^2 = 6 \times 6 = 36$	$\sqrt{36} = 6$
$7^2 = 7 \times 7 = 49$	$\sqrt{49} = 7$
$8^2 = 8 \times 8 = 64$	$\sqrt{64} = 8$
$9^2 = 9 \times 9 = 81$	$\sqrt{81} = 9$
$10^2 = 10 \times 10 = 100$	$\sqrt{100} = 10$
$11^2 = 11 \times 11 = 121$	$\sqrt{121} = 11$
$12^2 = 12 \times 12 = 144$	$\sqrt{144} = 12$

Key vocabulary

What is 7 squared?
What is 7 multiplied by itself?
What is the square root of 144?

Top tips

The secret to success is practising ***little*** and ***often*** Use time wisely. Can you practise this KIRF whilst walking to school or during a car journey? You do not need to practise all aspects of the KIRF all at once, perhaps you could have a fact of the day, or a few facts per week to practise? If you would like more ideas, please speak to your child's teacher.

Practical resources and ideas

Cycling squares: At http://nrich.maths.org/1151, there is a challenge involving square numbers. Can you complete the challenge and then create your own examples?

Mathletics

EdShed

Spelling Shed Maths Shed

What can I do at home to help my child with maths?

Mental Maths: Ask them times table and division facts before they go to bed and in the morning on the way to school. Give them quick fire addition and subtraction questions up to 10, up to 20 and up to 100. + - x ÷

Telling the Time: Help them learn to tell the time both in analogue and digital. Keep asking them what the time is and what the time it will be in X amount of minutes. Promise to buy them a watch if they learn to tell the time. They are allowed to wear watches at school as long as they can tell the time.

Money Matters: Give them money challenges. Ask them to pay for things in shops. Ask them to work out the change. We have plastic coins in school but nothing can beat the real thing.

Arithmetic: Practice, practice practice.

Help with homework: Have a look at their homework and ask them to look again at questions they might have got wrong. Don't worry that you might be showing them the wrong way. The idea is that they become flexible and see that there are lots of ways to tackle a problem.

Any Questions?