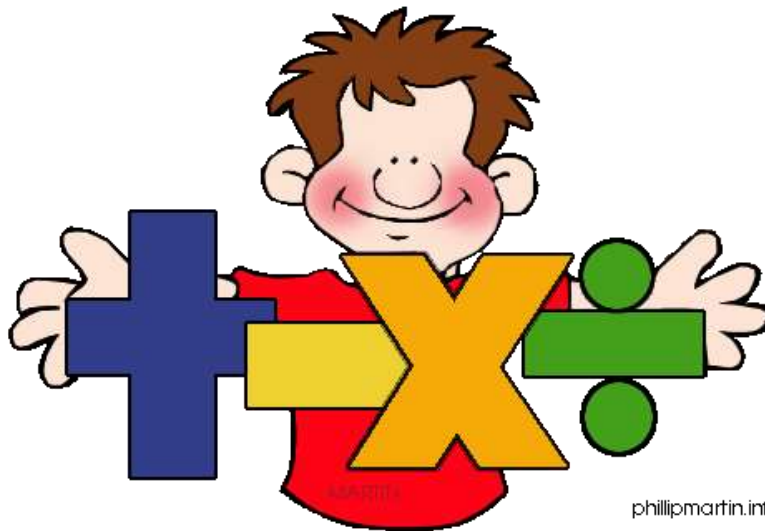


# Mathematics Calculation Strategies

**multiplication and division**  
**Tuesday 8th May 2018**



# Aims

- **Raise the awareness of the importance of your child's ability to have total recall of the Big Maths Learn Its.**
- **Share calculation strategies for multiplication and division.**
- **Practise strategies.**
- **Evaluation and question time!**



## What is a 'Learn It'?

A 'Learn It' is a number fact that is learnt so well that it can be recalled instantly. It includes all of the 1 digit add 1 digit answers (sums) as well as the 1 digit multiplied by 1 digit answers (products).

# The 72 Learn Its

- In Big Maths children learn the concept of 'switchers' and 'fact families'.
- Immediately reduces the amount of learning to a more manageable level.
- 36 addition facts to learn
- 36 tables facts to learn.

The 36 Addition 'Learn Its'

+	2	3	4	5	6	7	8	9
2	4							
3	5	6						
4	6	7	8					
5	7	8	9	10				
6	8	9	10	11	12			
7	9	10	11	12	13	14		
8	10	11	12	13	14	15	16	
9	11	12	13	14	15	16	17	18

The 36 Multiplication 'Learn Its'

x	2	3	4	5	6	7	8	9
2	4							
3	6	9						
4	8	12	16					
5	10	15	20	25				
6	12	18	24	30	36			
7	14	21	28	35	42	49		
8	16	24	32	40	48	56	64	
9	18	27	36	45	54	63	72	81

## SWITCHERS!

$$6 + 4 = 10$$

$$4 + 6 = 10$$

## FACT FAMILIES!

$$7 + 8 = 15$$

$$8 + 7 = 15$$

$$15 - 7 = 8$$

$$15 - 8 = 7$$

$$6 \times 4 = 24$$

$$4 \times 6 = 24$$

$$24 \div 4 = 6$$

$$24 \div 6 = 4$$

# The Learn Its Steps

## Making it all 'Do-able'!

The table shows the breakdown Big Maths uses to present the step by step progression for recalling these 72 facts from EYFS to the end of Year 4.

Step	Addition	Multiplication
1	1+1, 2+2	
2	3+3, 4+4, 5+5	
3	1+2, 2+3	Multiples of 10 - in Counting
4	2+8, 3+7, 4+6	Multiples of 5 - in Counting
5	4+2, 5+2, 6+2, 7+2, 9+2, 4+3, 5+3, 6+3	
6	6+6, 7+7, 8+8, 9+9	Multiples of 2 - in Counting
7	3+8, 3+9, 4+7, 4+8, 4+9	x 10 Table
8	4+5, 5+6, 6+7, 7+8, 8+9	x 5 Table
9	5+9, 6+9, 7+9, 5+7, 5+8, 6+8	x 2 Table
10		x 3 Table
11		x 4 Table
12		x 8 Table
13		The 6 Fact Challenge
14		x 11 Table
15		x 12 Table



## What do we mean by total recall?

With genuine recall of facts there is no thinking time. The expectation is there that pupils will be able to recall all the 'Learn Its' as well as they know  $1 + 1$ , or as well as they know their own name!

## Why are 'Learn Its' useful?

'Learn Its' save us from counting again and again. They are number facts that we need to apply repeatedly in arithmetic, fractions, decimals and percentages, measure, statistics, ratio and proportion and real life maths. That is why it is highly efficient to learn them as facts. For all of them, we could just count every time but it is time consuming and it means we cannot become numerate!

A strong recall of 'Learn Its' allows the child to be confidently numerate.

# Learn Its Challenges

Each day the children are involved in a 5 minute session practising the Learn Its linked to the step they are on.

Every Friday the children are given a Learn Its Challenge to complete in a set time which tests their recall of the facts.

## Home Learning

A maximum of 2 facts that the child was unable to instantly recall will be sent home for them to practise.

**BEAT THAT!**

**LEARN ITS Challenges!**

Steps 8, 9 & 10

Name \_\_\_\_\_  
Class \_\_\_\_\_  
Date \_\_\_\_\_

Step 8		Step 9		Step 10	
$9 \times 5 =$	$3 \times 5 =$	$3 \times 2 =$	$6 + 8 =$	$3 \times 1 =$	$6 \times 3 =$
$6 + 5 =$	$5 \times 8 =$	$8 + 5 =$	$2 \times 4 =$	$5 \times 3 =$	$3 \times 7 =$
$5 + 4 =$	$5 \times 5 =$	$2 \times 2 =$	$5 \times 2 =$	$3 \times 3 =$	$10 \times 3 =$
$5 \times 6 =$	$8 + 7 =$	$9 + 5 =$	$2 \times 6 =$	$3 \times 4 =$	$9 \times 3 =$
$8 + 9 =$	$5 \times 7 =$	$8 \times 2 =$	$2 \times 7 =$	$2 \times 3 =$	$8 \times 3 =$
$1 \times 5 =$	$5 \times 4 =$	$7 + 9 =$	$6 + 9 =$		
$5 \times 2 =$	$7 + 6 =$	$1 \times 2 =$	$2 \times 9 =$		
$10 \times 5 =$		$7 + 5 =$	$10 \times 2 =$		

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MY BEAT THAT! SCORE WAS \_\_\_\_\_

Wk: 1 Score!

## Helping at home

- Have the 2 facts displayed really clearly on the fridge - make sure you include switchers and fact families.
- Make learning the facts fun: involve actions or silly voices.
- Let your child test you!
- Play Fast and Furious, for example Let's make this number 4 times bigger. I say 6, you say... and the child answers 24.
- Ask your child, as often as possible, what are your Learn Its?

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