

A decorative border of mathematical symbols surrounds the central text. The symbols include addition (+), subtraction (-), multiplication (x), division (÷), percentage (%), equals (=), less than (<), greater than (>), and the pound sterling symbol (£). The symbols are arranged in a rectangular frame with a yellow background.

***Hazlemere C of E School
Calculations Policy***

ADDITION:

Pre written stages/Mental stages#

Stage 1

- Practical activities and discussions
- Finding one more than a number from 1 to 10
- Using vocabulary associated with addition

Stage 2

- Begin to use the + and = sign to record mental calculations
- Know by heart all number bonds to 10
- Use knowledge to know that addition can be done in any order to do mental calculations more efficiently

Stage 3

- Adding three single digit numbers mentally
- Know by heart all number bonds to 20
- Use + and = to record mental calculations
- Use a number line to make jottings
- Use partitioning to reflect mental methods e.g. $47+78=40+70+7+8$

Written Stages

Stage 1 – Expanded method which can be used throughout

TU +TU

HTU + HTU

ThHTU + ThHTU

Money

Decimals

Word Problems

			T	U		
			1	4		
		+	3	5		
				9		
			4	0		
			4	9		

Stage 2 - NO CARRYING

TU +TU

HTU + HTU

ThHTU + ThHTU

Money

Decimals

Word Problems

			T	U		
			1	4		
		+	3	5		
			4	9		

			H	T	U	
			6	1	4	
		+	2	3	5	
			8	4	9	

Stage 3 - NO CARRYING

HTU + TU

ThHTU + HTU

ThHTU + TU

Money

Decimals

Word Problems

				H	T	U	
				6	1	4	
		+			3	5	
				6	4	9	

Stage 4 – 1 CARRY

- TU + TU
- HTU + HTU
- ThHTU + ThHTU
- HTU + TU
- ThHTU + HTU
- ThHTU + TU
- Money
- Decimals
- Word Problems

		T	U		
		1	4		
	+	3	7		
		5	1		
		1			

	H	T	U		
	6	1	4		
+	3	3	7		
	9	5	1		
		1			

Stage 5 – MORE THAN 1 CARRY AND TO AN EMPTY COLUMN

All the above stages

	H	T	U		
	6	1	4		
+	1	8	7		
	8	0	1		
	1	1			

	H	T	U		
		1	4		
+		8	7		
	1	0	1		
	1	1			

Vocabulary

- Add
- Addition
- Adding
- Plus
- Sum of
- And
- Total
- Increase
- More than
- Greater than
- Altogether
- Column addition
- Carry

SUBTRACTION:

Pre written stages/Mental stages

Stage 1

- Practical activities and discussions
- Finding one less than a number from 1 to 10
- Begin to relate subtraction to 'taking away'

Stage 2

- Begin to use the - and = sign to record mental calculations
- Know by heart all subtraction facts to 10

Stage 3

- Know by heart all subtraction facts to 20

Written Stages

Stage 1

Using a number line to record complementary addition

Stage 2 - NO EXCHANGES

TU – U
 TU – TU
 HTU – HTU
 ThHTU – ThHTU
 HTU – TU
 ThHTU – HTU
 ThHTU – TU
 Money
 Decimals
 Word Problems

		T	U		
		7	9		
	-	4	3		
		3	6		

		H	T	U	
		6	9	8	
	-	1	2	4	
		5	7	4	

Stage 3 – WITH 1 EXCHANGE

TU – U
 TU – TU
 HTU - HTU
 ThHTU – ThHTU
 HTU – TU
 ThHTU – HTU
 ThHTU – TU
 Money
 Decimals
 Word Problems

		T	U		
		6	7	13	
	-	4	5		
		2	8		

		H	T	U	
		6	7	8	10
	-	1	2	4	
		5	5	6	

Stage 4 – WITH MORE THAN 1 EXCHANGE

TU – TU
HTU - HTU
ThHTU – ThHTU
HTU – TU
ThHTU – HTU
ThHTU – TU
Money
Decimals
Word Problems

		H	T	U	
		5	1	1	
		6	7	4	
	-	3	8	9	
		2	8	5	

Stage 5 – WHERE YOU CAN'T EXCHANGE WITH THE NEXT COLUMN (crossing over zero)

All the above stages.

Vocabulary

Subtraction

Minus

Decrease

Less than

Take away

Difference

Subtract

Reduce

Fewer

Take from

How many left

Column subtraction

Exchange or change (we exchange a ten for 10 units)

Multiplication:

Pre written stages/Mental stages

Stage 1

- Working at a practical level to gain experience of doubling and becoming familiar with appropriate language

Stage 2

- Know by heart addition doubles to at least 5
- Understand multiplication as repeated addition
- Know by heart the multiplication facts for 10 and 2 multiplication tables

Written Stages

Stage 1

TU x U
 HTU x U
 ThHTU x U
 Word Problems

	1	3	x	6					
								T	U
	x	1	0		3			6	0
	6	6	0	1	8		+	1	8
								7	8

			T	U					
			1	3					
	x		6						
			1	8	(6 x 3)				
	+		6	0	(6 x 1 0)				
			7	8					

			T	U					
			1	3					
	x		6						
			7	8					
			1						

Stage 2

TU x TU
 HTU x TU
 ThHTU x TU
 Word Problems

	1	3	x	1	6							
	x		1	0		3		H	T	U		
	1	0	1	0	0	3	0	1	3	0		
	6		6	0	1	8		+		7	8	
										2	0	8
										1		

			T	U					
			1	3					
	x		1	6					
			1	8	(6 x 3)				
			6	0	(6 x 1 0)				
			3	0	(1 0 x 3)				
	+		1	0	0	(1 0 x 1 0)			
			2	0	8				
			1						

			T	U					
			1	3					
	x		1	6					
			7	8					
			1	¹ 3	0				
			2	0	8				
			1						

Stage 3

HTU x HTU
 ThHTU x HTU
 ThHTU x ThHTU
 Word Problems

Stage 4 - Decimals

U x U.t
 TU x U.t
 HTU x U.t
 U x TU.t
 TU x TU.t
 HTU x TU.t
 Word Problems

Vocabulary

Multiplication
 Times
 Multiply
 Product
 Groups of
 Lots of
 Double
 Multiple
 Repeated addition
 Grid method
 Column multiplication
 Long multiplication

Division:

Pre written stages/Mental stages

Stage 1

- Working at a practical level to gain experience of sharing and the become familiar with the appropriate language

Stage 2

- Separate a given number of objects into equal groups and record results informally

Stage 3

- Understand division as grouping, repeated subtraction or sharing and record informally

Stage 4

- Using multiplication facts to derive division facts

Written Stages

Stage 1

TU ÷ U
 HTU ÷ U
 ThHTU ÷ U
 Word Problems

		0	9	7	r	3
	9	8	7	6		

Stage 2

TU ÷ TU
 HTU ÷ TU
 ThHTU ÷ TU
 Word problems

				4	6	r	2		
	1	9	7	8	1	7	6		
		-	1	9	0	(1	0	x)	
			5	6	1	8	6		
		-	1	9	0	(1	0	x)	
			4	9	6				
		-	1	9	0	(1	0	x)	
			2	3	1	0	6		
		-	1	9	0	(1	0	x)	
			1	1	6				
		-		9	5	(5	x)		
			1	2	1	1			
		-		1	9	(1	x)		
					2				

Stage 3

HTU ÷ HTU
 ThHTU ÷ HTU
 ThHTU ÷ ThHTU
 Word Problems

Stage 4 - Decimals

Repeated subtraction method to be used for all decimal divisions.

Vocabulary

- Division
- Share
- Divide
- Split
- Group
- Share equally
- Divisible by
- Halve
- Divisible
- Repeated subtraction
- Short division

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