Fluent in Five

Progression in Objectives Document

Year 6

Progression in Objectives

This shows the objectives for Year 6 that can be tested in the arithmetic paper. These are shown alongside Year 5 objectives, which by the start of Year 6 it is assumed all children will be secure in. The Fluent in Five daily challenges are based on children progressing to Year 6 objectives throughout the first term, with the majority of calculations objectives secure by the start of spring term.

A quick note about 2 mark questions: The only objectives that could be the subject of 2 mark questions in the arithmetic test are those highlighted in blue. All other objectives would be worth 1 mark.

Contents

For more free resources and intervention support go to **thirdspacelearning.com**

Number and place value

	Content domain references	End of Year 5	End of Year 6
Number and place value	**N1** Counting in multiples (NB: Can be used for multiplication questions in arithmetic papers).	Count in multiples of 2 ,4, 6, 7, 8, 9, 25 and all powers of 10 for any given number up to 1,000,000.	Count in multiples of 2, 4, 6, 7, 8, 9, 25 and all powers of 10 for any given number up to 1,000,000.
	N2 Reading and writing numbers (NB: This is the highest value numbers that can be tested).	Read, write, order and compare numbers to at least 1,000,000.	Read, write, order and compare numbers to at least 10,000,000
	N4 Finding 10, 100 more or less (mentally).	Find 10, 100 or 1,000 more of less than a given number.	Find 10, 100 or 1,000 more of less than a given number.
	N5 Place value in numbers.	Recognise the place value of each digit in numbers up to 1,000,000.	Recognise the place value of each digit in numbers up to 1,000,000.

For more free resources and intervention support go to **thirdspacelearning.com**

	Content domain references	End of Year 5	End of Year 6
Number and place value (continued)	**N6** Negative numbers	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.	Use negative numbers in context, and calculate intervals across zero.

The Four Operations

	Content domain references	End of Year 5	End of Year 6
The four operations	**C1** Mental addition and subtraction.	a) Add and subtract numbers with up to three digits and ones.	a) Add and subtract numbers with up to three digits and ones.
		b) Add and subtract numbers with up to three digit number and tens.	b) Add and subtract numbers with up to three digits and tens.
		c) Add and subtract numbers with up to three digits and hundreds.	c) Add and subtract numbers with up to three digits and hundreds.
		d) Add and subtract two two-digit numbers (no crossing of tens boundary).	d) Add and subtract two two-digit numbers (crossing of tens boundary).
		e) Add three one-digit numbers.	e) Add three one-digit numbers.
		f) Add and subtract multiples of 10 and 100 mentally.	f) Add and subtract multiples of 10 and 100 mentally.
		g) Add and subtract near multiples of 10, 100 and 1,000 mentally.	g) Add and subtract near multiples of 10, 100 and 1,000 mentally.
		h) Add and subtract numbers which include tenths mentally.	h) Add and subtract decimal numbers with up to three places mentally.

For more free resources and intervention support go to **thirdspacelearning.com**

The Four Operations

	Content domain references	End of Year 5	End of Year 6
The four operations (continued)			i) Solve mental calculations which involve multiple operations.

	Content domain references	End of Year 5	End of Year 6
The four operations (continued)	**C2** Written addition and subtraction.	Add and subtract numbers with more than 4 digits using the formal written methods of columnar addition and subtraction where appropriate.	a) Add and subtract numbers with more than 4 digits using the formal written methods of columnar addition and subtraction where appropriate.
			b) Add and subtract decimal numbers using the formal written methods of columnar addition and subtraction where appropriate.
	C3 Known multiplication and division facts.	Recall and use multiplication and division facts for all times tables up to 12 x 12.	Recall and use multiplication and division facts for all times tables up to 12 x 12.
	C4 Multiplication using known facts and place value.	a) Use place value, known and derived facts to multiply by 0.	a) Use place value, known and derived facts to multiply by 0.
		b) Use place value, known and derived facts to multiply and divide by 1.	b) Use place value, known and derived facts to multiply and divide by 1.
		c) Use place value, known and derived facts to multiply 3 single digit numbers.	c) Use place value, known and derived facts to multiply 3 single digit numbers.

For more free resources and intervention support go to **thirdspacelearning.com**

	Content domain references	End of Year 5	End of Year 6
The four operations (continued)		d) Use place value, known and derived facts to multiply multiples of 10 by a single digit number.	d) Use place value, known and derived facts to multiply multiples of 10 by a single digit number.
		e) Multiply and divide whole numbers, including those involving decimals, by 10, 100 and 1,000.	e) Multiply and divide whole numbers, including those involving decimals, by 10, 100 and 1,000.
		f) Use place value, known and derived facts to multiply and divide multiples of 10 and 100 by single digit numbers.	f) Use place value, known and derived facts to multiply and divide multiples of 10 and 100 by single digit numbers, and to multiply by 25.
		g) Use place value, known and derived facts to multiply and divide multiples of 10 and 100 together.	g) Use place value, known and derived facts to multiply and divide multiples of 10 and 100 together.
		h) Use place value, known and derived facts to multiply and divide by 25.	h) Multiply decimals with up to 2 decimal places by a single digit number. (NB: some children may find using an informal written method helps with this type of calculation).

For more free resources and intervention support go to **thirdspacelearning.com**

	Content domain references	End of Year 5	End of Year 6
The four operations (continued)	**C8** Known multiplication and division facts.	a) Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.	a) Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.
		b) Multiply numbers up to 4 digits by a two-digit number, including long multiplication for two digit numbers.	b) Multiply numbers up to 4 digits by a two-digit number, including long multiplication for two digit numbers.
		c) Divide numbers with up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context [NB: In calculation paper, remainders as either a remainder (e.g. 5 r 3), fraction (e.g. 5 r 3/5) or decimal (e.g. 5.6) will always be acceptable]	c) Divide numbers with up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. [NB: In calculation paper, remainders as either a remainder (e.g 5 r 3), fraction (e.g. 5 r $\frac{3}{5}$) or decimal (e.g. 5.6) will always be acceptable]
		d) Solve problems, including missing number problems, involving multiplication and division.	d) Solve problems, including missing number problems, involving multiplication and division.

	Content domain references	End of Year 5	End of Year 6
The four operations (continued)	**C9** Square and Cubes.	a) Solve problems involving square numbers.	a) Solve problems involving square numbers.
		b) Solve problems involving cubed numbers.	b) Solve problems involving cubed numbers.
	C10 Order of Operations.		Use their knowledge of the order of operations to carry out calculations involving the four operations.

For more free resources and intervention support go to **thirdspacelearning.com**

Fractions

	Content domain references	End of Year 5	End of Year 6
Fractions	**F1** Fractions of numbers.	Recognise, find and write fractions of a discrete set of objects and numbers: unit fractions and non-unit fractions (any denominators - linked to times tables facts).	Recognise, find and write fractions of a discrete set of objects and numbers: unit fractions and non-unit fractions (any denominators - linked to times tables facts).
	F2 Decimals	Count up and down in tenths and hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.	Count up and down in tenths and hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.
	F3 Types of fractions.	Recognise and use fractions as numbers: unit fractions and non-unit fractions with any denominators.	Recognise and use fractions as numbers: unit fractions and non-unit fractions with any denominators.
	F5 Calculations with fractions.	a) Add and subtract fractions with the same denominator and denominators that are multiples of the same number.	a) Add and subtract fractions with different denominators and mixed numbers using the concept of equivalent fractions.
		b) Multiply proper fractions and mixed numbers by whole numbers.	b) Multiply proper fractions and mixed numbers by whole numbers.

For more free resources and intervention support go to **thirdspacelearning.com**

Fractions

	Content domain references	End of Year 5	End of Year 6
Fractions (continued)			c) Multiply simple pairs of proper fractions, writing the answer in its simplest form.
			d) Divide proper fractions by whole numbers.

For more free resources and intervention support go to **thirdspacelearning.com**

Percentages

	Content domain references	End of Year 5	End of Year 6
Percentages	**P1** Percentages of numbers.		Solve problems involving the calculation of percentages [e.g. of measures such as 15% of 360].

For more free resources and intervention support go to **thirdspacelearning.com**