

AUTUMN TERM MATHEMATICS OVERVIEW – YEAR 6

Daily Mathematics Lesson – 1 hour (one/two lessons each week to be a discrete arithmetic lesson)

Y6 target - 99 challenge/Platinum

BLOCKS	NATIONAL CURRICULUM OBJECTIVES KEY OBJECTIVES	SMALL STEPS	READY TO PROGRESS CRITERIA	Linked Step	
Place Value 2 weeks	❖ read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit ❖ (read, write), order and compare numbers up to 10 000 000 and determine the value of each digit ❖ round any whole number to a required degree of accuracy ❖ use negative numbers in context, and calculate intervals across zero ❖ solve number and practical problems that involve all of the above	• Numbers to 1,000,000 • Numbers to 10,000,000 • Read and write numbers to 10,000,000 • Powers of 10 • Number line to 10,000,000 • Compare and order any integers • Round any integer • Negative numbers	6NPV-1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). 6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning. 6NPV-3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. 6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.	• Powers of 10 • Numbers to 1,000,000 • Numbers to 10,000,000 • Read and write numbers to 10,000,000 • Compare and order any integers • Round any integer • Number line to 10,000,000	End of block assessment

Four operations 5 weeks	❖ perform mental calculations, including with mixed operations and large numbers ❖ use their knowledge of the order of operations to carry out calculations involving the four operations ❖ solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why ❖ identify common factors, common multiples and prime numbers ❖ use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy ❖ multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication ❖ divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context ❖ divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context ❖ solve problems involving addition, subtraction, multiplication and division ❖ use their knowledge of the order of operations to carry out calculations involving the four operations	• Add and subtract integers • Common factors • Common multiples • Rules of divisibility • Primes to 100 • Square and cube numbers • Multiply up to a 4-digit number by a 2-digit number • Solve problems with multiplication • Short division • Division using factors • Introduction to long division • Long division with remainders • Solve problems with division • Solve multi-step problems • Order of operations • Mental calculations and estimation • Reason from known facts	6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.	• Solve problems with multiplication • Division using factors • Solve problems with division • Solve multi-step problems • Reason from known facts	End of block assessment
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Fractions A 2 weeks	❖ use common factors to simplify fractions; use common multiples to express fractions in the same denomination ❖ compare and order fractions, including fractions > 1 ❖ add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	• Equivalent fractions and simplifying • Equivalent fractions on a number line • Compare and order (denominator) • Compare and order (numerator) • Add and subtract simple fractions • Add and subtract any two fractions • Add mixed numbers • Subtract mixed numbers • Multi-step problems	6F-1 Recognise when fractions can be simplified, and use common factors to simplify fractions. 6F-2 Express fractions in a common denomination and use this to compare fractions that are similar in value. 6F-3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.	• Equivalent fractions and simplifying • Equivalent fractions on a number line • Compare and order (denominator) • Compare and order (denominator) • Compare and order (numerator)	End of block assessment
Fractions B 2 weeks	❖ multiply simple pairs of proper fractions, writing the answer in its simplest form ❖ divide proper fractions by whole numbers	• Multiply fractions by integers • Multiply fractions by fractions • Divide a fraction by an integer • Divide any fraction by an integer • Mixed questions with fractions • Fraction of an amount • Fraction of an amount – find the whole			End of block assessment

Converting Units 1 week	❖ solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 d.p. where appropriate ❖ use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 d.p. ❖ convert between miles and kilometres ❖ use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa Time conversions are covered in Y5; the Y6 block concentrates on metric units.	• Metric measures • Convert metric measures • Calculate with metric measures • Miles and kilometres • Imperial measures			End of block assessment
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