

CARIBBEAN PRIMARY MATHEMATICS



Second edition

Student's Book 6

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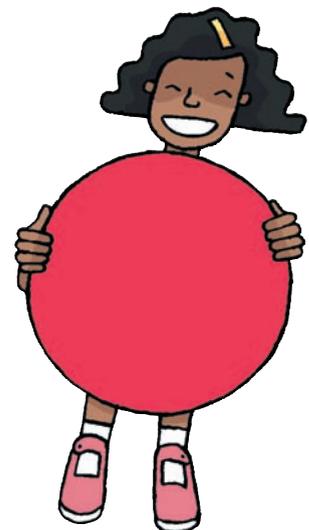
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Note to parents



An examination year can be challenging to parents as well as students. Encouraging students to take the time to think and building their confidence through reminding them of what they already know are two helpful steps. If students learn Mathematics through connecting these skills to practical activities and situations, they will see and use it in a natural and useful way that extends beyond the classroom or examinations.

Parents can help students build their mathematical reasoning skills and their understanding of the concepts of Mathematics by supporting them as they learn. Ask questions to help children think mathematically. Children need to be encouraged to ask questions, to notice details and to talk about what they know without fear of being wrong. When doing word problems, students who ask questions, and discuss what they know and what they need to find out, build confidence that allows them to try different approaches or methods. Often, a strategy or concept learnt in one area might be useful in another area, so connections and exploration are very important.

The Student's Book contains many features useful for revision in an examination year. There are Challenge questions to push a student's thinking and stimulate learning, and features that help build mathematical vocabulary or highlight key points to remember. There are also Hint and Strategy features that help students develop critical thinking.

Many adults grew up with the idea that there were rigid procedures about how Mathematics must be taught. Partly as a result, Mathematics seemed hard and fear of failure was high. Now we understand that it is better to encourage students to try different approaches and to talk about their reasoning, especially in problem solving. Students today are sometimes encouraged to work with a partner or a group and to use the language of Mathematics in everyday ways. Working together, trying out different ideas or strategies, giving reasons why the final answer makes sense, these are all important life skills that start at an early age. They also lay a strong foundation for the higher Mathematics of secondary school and augur well for success in examinations.

One of the best ways you can help with homework is to talk with your child about whether answers make sense and are accurate. Often, successful strategies involve drawing pictures or diagrams, which may be unfamiliar to parents compared to traditional approaches. However, the most successful strategies are those that give precise, accurate results and are well understood by the child. Every child learns differently and teachers offer more than one approach to help all students understand.

The **Bright Sparks** Workbook ties directly to the lessons in class from the Student's Book and includes related unit numbers. Looking over the Student's Book and reviewing the examples there can help students to recall the lesson from class and stimulate their thinking.

The Student's CD gives extra practice on key mathematical ideas for this year group. Students are given different styles for presenting answers, which keeps it interesting, as well as several questions that are a challenge.

Curiosity, asking questions, not being afraid to try out an idea – these are the traits that encourage children to love Mathematics and to be successful.

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Scope and sequence

Major concept	Knowledge and skills
Number / Sequencing / Number concepts / Number	Use counting skills, read numbers, natural/whole numbers, odd/even, sequencing Use ordinal numbers Identify value, place or face value of any digit in a 7 digit number (enrichment: ten and hundred millions) Expand numbers with or without regrouping (including multiplicative or exponential) Compare and order numbers using $<$, $>$, $=$, with or without decimals or fractions, using appropriate terminology Identify decimal numbers value, place and expanded forms to 2 (3) decimal places Recognise Roman numerals used in practical situations (e.g. clocks)
Sequencing	Extend patterns involving arithmetic operations, fractions, decimals, square or cube numbers, shapes Count the interval between two numbers, inclusive or not/solve problems involving consecutive numbers or intervals (e.g. fence poles and spaces)
Number concepts	Identify and use: prime/composite numbers; prime factors; factors; multiples LCM and HCF (GCF) Square numbers/square roots Identify the reciprocal Compare and exchange decimals and fractions and place on a number line Explore integers using a number line Practical situations using negative integers (temperature) Explore irrational numbers/repeating decimals
Operations / Relationships / Properties	Commutative law ($\times +$) Associative law ($\times +$) Identity elements ($\times +$) and zero properties Distributive property of multiplication
Number sense	Use properties of numbers to simplify and rearrange equations, break up numbers for mental Mathematics or simplify problem-solving approaches Recognise patterns in a 'worked problem' to solve related equations (e.g. halving, doubling) Restate numbers using the distributive property of \times , with or without regrouping Estimate reasonable results Round numbers
Computation: Whole numbers	Demonstrate skill with a calculator as an operational tool Basic operations: mentally add/subtract 1–3-digit numbers to/from 1–2-digit numbers Add and subtract accurately Multiply and divide by 1–3-digit numbers Use multiplication tables proficiently Use four operations in problem solving and explain choice of operation Convert remainders in division to fractions or decimals Apply skills to single and multi-step word problems Use order of operations (BODMAS) Solve equations with more than one sign
Fractions	Read/write/identify and describe fractions Illustrate/determine fractions of a whole Find fractional parts of a given quantity Identify equivalent fractions Order and compare fractions Convert improper fractions/mixed numbers Add or subtract fractions with or without like denominators, giving answers in simplest form Simplify fractions and mixed numbers Use cancellation in multiplying fractions Multiply or divide fractions, including mixed numbers or fractions and whole numbers, giving the answers in lowest terms Use fractions in practical situations Use order of operations with fractions
Decimals	Compare and order decimal numbers Add and subtract numbers with 1 or 2 (3) decimal places Divide and multiply decimal numbers by multiples of 10 Connect multiplication of decimals to fractions Multiply and divide up to 3 decimal places by a whole number Multiply and divide by a decimal number after first multiplying by a power of 10 to change the decimal to a whole number Solve problems using decimal numbers, including measurement and money situations Round to the nearest cent or dollar Use estimation of decimal numbers in practical applications Convert fractions/decimals/percents
Percent / Percentage	Find the percent of a whole/quantity Find the total when given a percent Use percent to solve real-world problems Convert between fraction/percent/decimal to simplify problem-solving situations