**Step 6 and 7 – Number**

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| **Curriculum Statement** | **Step 6 Exploring** | **Step 6 Achieving** | **Step 6 Exceeding** | **Curriculum Statement** | **Step 7 Exploring** | **Step 7 Achieving** | **Step 7 Exceeding** |
| Count forwards and backwards with positive and negative whole numbers including through zero | I can count involving negative numbers. | I can continue sequences involving negative numbers. | I can solve problems involving sequences including negative numbers. | Calculate intervals across zero | I can work out the difference between negative numbers and zero. | I can work out the difference between negative and positive numbers. | I can explain whether I need to add or subtract to find differences between positive and negative numbers. |
| Count forwards and backwards in steps of powers of 10 for any given number to 1000000 | I can count in thousands starting from any 5-digit number. | I can count in steps of 10, 100, 1000, 10000 and 100000. | I can reduce any number to zero using my understanding of place value up to 1000000. | Consolidate counting forwards or backwards in steps of powers of 10 for any given number to 1000000 | *Covered by other targets* |
| Continue to count in any multiples of 2 to 10, 25 and 50. | I can count in 11s and 12s. | I can work out if a number is a multiple of any number. | I can identify if numbers are in more than one times table. | Consolidate counting in multiples of 2 through to 10, 25 and 50 | *Covered by other targets* |
| Read and write numbers to at least 1000000 and determine the value of each digit | I can spot ten thousands and hundred thousands in a 5- or 6-digit number. | I can say the value of each digit in a 6-digit number. | I can use my understanding of place value, up to 6 digits, to solve problems. | Read and write numbers to 10000000 and determine the value of digits | I can read and write 7-digit numbers that are multiples of 100. | I can read and write any 7-digit number. | I can use my understanding of place value, up to 7 digits, to solve problems. |
| Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. | I can convert 3-digit numbers into Roman numerals. | I can convert 4-digit numbers into Roman numerals, using M for 1000, and read the date written in Roman numerals. | I can explain why it is hard to do calculations with large numbers in Roman numerals. | Consolidate reading Roman numerals to 1000 (M) and recognising years written in Roman numerals | *Covered by other targets* |
| Interpret negative numbers in context | I can order negative numbers in a context such as temperature. | I can order negative numbers. | I can solve problems that involve ordering negative numbers. | Use negative numbers in context | I can find differences between negative numbers in a context such as temperature. | I can find differences between negative numbers. | I can solve problems that involve finding the difference between negative numbers. |
| Order and compare numbers to at least 1000000 | I can order and compare 5-digit numbers. | I can use the signs < and > when I am ordering 6-digit numbers. | I can solve problems ordering numbers up to 1000000. | Order and compare numbers up to 10000000 | I can order and compare 7-digit numbers. | I can use the signs < and > when I am ordering 7-digit numbers. | I can solve problems ordering numbers up to 10000000. |
| Solve number problems and practical problems with number and place value from the Year 5 curriculum | I can solve a problem using numbers and facts that I know, including multi-step problems involving all 4 number operations, and fractions. | I can solve a problem using numbers and facts that I know, including multi-step problems with larger numbers involving all 4 number operations and fractions. | I can solve a problem using numbers and facts that I know, and explain how and why I have chosen a particular strategy. | Solve number problems and practical problems with number and place value from the Year 6 curriculum | I can solve a problem using numbers and facts that I know, including multi-step problems involving all 4 number operations and fractions in unfamiliar contexts. | I can solve a problem using numbers and facts that I know, including multi-step problems with larger numbers involving all 4 number operations and fractions in unfamiliar contexts. | I can solve a problem using numbers and facts that I know, and explain how and why I have chosen a particular strategy. |
| Round any number to 1000000 to the nearest 10, 100, 1000, 10000 and 100000 | I can round 5-digit numbers to the nearest 10, 100, 1000 and 10000. | I can round 6-digit numbers to the nearest 10, 100, 1000, 10000 and 100000. | I can solve numbers problems that involve rounding numbers to 1000000. | Round whole numbers to 10000000 to a required degree of accuracy | I can round numbers to a multiple of 10. | I can round numbers to a multiple of 100. | I can solve problems that involve rounding numbers to a multiple of 10 or 100. |
| Continue to use the distributive law to partition numbers when multiplying them. | *Covered by other targets* | Use knowledge of the order of operations | I know which order to do operations in complex sums, such as 7 + 2 x 3. | I can solve sums that involve brackets. | I can apply my understanding of the order of operations and using brackets, to solve sums missing signs as well as numbers. |
| Develop their understanding of the meaning of the equals sign | I can use my understanding of the = sign to solve missing number problems. | I can use my understanding of the = sign to make 2 calculations ‘balance’. | I can explain what the = sign means and how I can use this to help me solve problems. | Consolidate their understanding of the equals sign as representing equivalence between two expressions | *Covered by other targets* |
| Recall prime numbers up to 19 | I can recall the prime numbers up to 10. | I can recall the prime numbers up to 19. |  |  |  |  |  |
| Establish whether a number up to 100 is prime | I can test if numbers between 10 and 20 are prime by dividing them by small numbers. | I can test if numbers between 20 and 50 are prime numbers by dividing them. | I can use my knowledge of small prime numbers to check if numbers between 50 and 100 are prime. | Consolidate understanding of the structure of numbersConsolidate knowledge of types of number | I can use my knowledge of multiples from knowing the times tables to help me solve questions. | I can use my knowledge of factors to help me solve questions. | I can use my knowledge of factors and primes to solve problems. |
| Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers | I can explain why a number is prime. | I can explain how a composite number has factors that are prime. | I can apply my knowledge of prime numbers and factors to solve problems. |
| Add and subtract numbers mentally with increasingly large numbers | I can mentally add and subtract larger numbers that are multiples of 10. | I can mentally add and subtract larger numbers where one number is a multiple of 10. | I can mentally solve missing number problems involving larger numbers. | Perform mental calculations, including with mixed operations and large numbers | I can mentally solve calculations involving small numbers (<10) and a mix of operations. | I can mentally solve calculations involving larger numbers (10>20 or multiples of 10) and a mix of operations. | I can mentally solve problems involving different calculations using all operations. |
| Continue to develop knowledge of addition and subtraction facts and to derive related facts | I can use my knowledge of number facts to 100 to derive some related facts. | I can use my knowledge of number facts to 100 to derive lots of related facts. | I can explain how I can derive related facts from number facts I know. | Consolidate knowledge of addition facts and the related subtraction facts, deriving further related facts as required | I can use my knowledge of number facts to 1000 to derive some related facts. | I can use my knowledge of number facts to 1000 to derive lots of related facts. | I can explain how I can derive related facts from number facts I know. |
| Multiply and divide numbers mentally drawing upon known facts |  |  |  | Identify common factors, common multiples and prime numbers greater than 100 | I can find common factors and multiples for 2 given numbers. | I can find prime numbers that are larger than 100. | I can identify highest common factors and least common multiples of given numbers. |
| Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 | I can multiply and divide numbers including decimals by 10 and 100. | I can multiply and divide numbers including decimals by 1000. | I can multiply and divide numbers including decimals by multiples of 10 and 100. | Consolidate multiplying and dividing whole numbers and decimals by 10, 100 and 1000 | I can use my understanding of multiplying and dividing by 10, 100 and 1000 in a context such as measurement. | I can use my understanding of multiplying and dividing by 10, 100 and 1000 in different contexts such as measurements. | I can use my understanding of multiplying and dividing by 10, 100 and 1000 to help me solve problems. |
| Solve addition and subtraction multi-step problems in familiar contexts, decising which operations to use and why | *Covered by other targets* | Solve multi-step addition and subtraction problems in less familiar contexts, deciding which operations and methods to use and why | *Covered by other targets* |
| Solve problems involving addition, subtraction, multiplication and division and a combination of these | *Covered by other targets* | Consolidate solving problems using more than one of the four operations | *Covered by other targets* |
| Solve calculation problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes | *Covered by other targets* | Solve multi-step calculation problems involving combinations of all four number operations | *Covered by other targets* |
| Solve problems involving scaling by simple fractions and problems involving simple rates | *Covered by other targets* | Consolidate solving calculation problems involving scaling by simple fractions and simple rates | *Covered by other targets* |
| Identify multiples and factors, including all factor pairs of a number, and common factors of 2 numbers | I can find multiples and factors using my times table knowledge. | I can find common factors for numbers within the times tables. | I can solve problems involving finding factors and multiples within the times tables. | Consolidate knowledge of multiples and factors, including all factor pairs of a number, and common factors of 2 numbers | *Covered by other targets* |
| Recall square numbers and cube numbers and the notation for them | I know that 5² = 5 x 5, and is called a square number. | I can recall all the square and cube numbers to 100. | I can apply my understanding of square and cube numbers to find n4. | Consolidate recall square numbers and cube numbers and the notation for them |  | I can recall all the square and cube numbers up to 200. | I can apply my understanding of square and cube numbers to find nx. |
|  |  |  |  | Consolidate recall prime numbers up to 19 | *Covered by other targets* |
| Add and subtract whole numbers with more than 4 digits, including formal written methods (columnar addition and subtraction) | I can add and subtract 4- and 5-digit numbers using column methods. | I can add and subtract 5-digit numbers using column methods. | I can explain what I am doing when I am using column methods for addition and subtraction. | Consolidate adding and subtracting whole numbers with more than 4 digits, including formal written methods (columnar addition and subtraction) | I can add and subtract 5- and 6-digit numbers using column methods. | I can add and subtract 6-digit numbers using column methods. | I can explain what I am doing when I am using column methods for addition and subtraction. |
| Multiply numbers up to 4-digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers | I can use the grid method to multiply 4-digit numbers by 1- and 2-digit numbers. | I can use the long multiplication method to multiply 4-digit numbers by 1- and 2-digit numbers. | I can explain what I am doing when I am using the long multiplication method. | Multiply multi-digit numbers up to 4-digits by a two-digit whole number using the formal written method of long multiplication | I can use the long multiplication method to multiply 4- and 5-digit numbers by 2-digit numbers. | I can use the long multiplication method to multiply 5-digit numbers by 2-digit numbers. | I can use the long multiplication method to multiply numbers larger than 100000. |
| Divide numbers up to 4 digits by a one-digit number using formal written method of short division and interpret remainders appropriately for the context | I can use the short division method to divide 3-digit numbers, including answers with remainders. | I can use the short division method to divide 4-digit numbers, knowing what to do with the remainder depending on the context. | I can use the short division method to divide 4-digit numbers, including turning a remainder into a decimal. | Divide numbers up to 4-digits by a two-digit whole number using the formal methods of short or long division, and interpret remainders as appropriate for the context as whole numbers, fractions or by rounding | I can use the long division method to divide a 3-digit number by a 2-digit number. | I can use the long division method to divide a 4-digit number by a 2-digit number. | I can use the long division method to divide a number larger than 10000 by a 2-digit number. |
| Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy | I can, with help, check answer to sums involving all number operations by using rounding. | I can check answers to sums involving all number operations by using rounding. | I can check my answers to sums involving all number operations, explaining how I have done this. | Check answers to calculations with mixed operations and large numbers, choosing the most appropriate method, including estimation, and determining, in the context of a problem, an appropriate degree of accuracy | I can, with help, check my answers to all sums, including those with mixed operations and large numbers, using an appropriate method. | I can check my answers to all sums, including those with mixed operations and large numbers, using an appropriate method. | I can check my answers to all sums, including those with mixed operations and large numbers, explaining how and why I have done this. |
| Check answers to calculations and to multiplication and division calculations using the inverse | *Covered by other targets* | Check answers to calculations with all four operations involving any numbers by rounding | *Covered by other targets* |
| Write mathematical statements >1 as a mixed number | I can spot improper fractions and explain they are larger than 1. | I can convert between mixed numbers and improper fractions. | I can explain when it is better to use a mixed number or an improper fraction depending on the context. | Associate a fraction with division | I can relate proper fractions to a division fact. | I can relate improper fractions to a division fact. | I can explain when it is better to use a fraction or the related division fact depending on the context. |
| Continue to apply their knowledge of multiplication facts to find equivalent fractions | I can use times tables knowledge to create sets of equivalent fractions. | I can use times table knowledge to identify common factors to simplify fractions and find equivalents. | I can quickly calculate equivalent fractions. | Consolidate understanding of equivalent fractions by extending to improper fractions | I can recognise some improper fractions as equivalent. | I can recognise groups of equivalent improper fractions. | I can quickly recognise equivalent improper fractions and mixed numbers. |
| Recognise and use thousandths and relate them to tenths and hundredths | I can recognise and count in thousandths. | I can recognise and convert thousandths between fractions and decimals. | I can explain the relationship between thousandths, hundredths and tenths. | Identify the value of each digit in numbers given to three decimal places | I can recognise the value of each digit in decimals up to 2 places. | I can recognise the value of each digit in decimals up to 3 places. | I can give the value of digits beyond the decimal point in different denominations, for example seven-hundredths or seventy-thousandths. |
| Divide one- or two-digit numbers by 1000, identifying the value of digits in the answer as ones, tenths, hundredths and thousandths | I can divide 1- and 2-digit numbers by 1000 giving answers as decimals. | I can divide 1- and 2-digit numbers by 1000 giving answers as decimals, and explaining the value of each digit in these. | I can divide 1- and 2-digit numbers by 10000, explaining how this relates to dividing by 10, 100 and 1000. | Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places | I can multiply and divide any number by 10 and 100. | I can multiply and divide any number by 10, 100 and 1000. | I can multiply and divide decimals by 10, 100 and 1000. |
| Recognise the per cent symbol and understand that per cent relates to ‘number of parts per hundred’ | I can recognise the % sign, and know it means a number of parts out of 100. | I can relate my knowledge of fractions and decimals to percentages. | I can convert percentages to hundredths and use this to help me solve problems. | Consolidate recognition of the per cent symbol and understanding that per cent relates to ‘number of parts per hundred’ | *Covered by other targets* |
| Identify and name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths | I can identify groups of equivalent fractions from diagrams, explaining what makes them equivalent. | I can identify groups of equivalent fractions from diagrams, explaining why some groups contain lots and some don’t. | I can identify groups of equivalent fractions with any denominator from diagrams, explaining the sizes of different groups. | Use common factors to simplify fractions | I can use simple common factors to simplify fractions. | I can use common factors to simplify fractions. | I can identify the highest common factor to simplify fractions in one step. |
| Recognise mixed numbers and improper fractions and convert from one form to the other | *Covered by other targets* | Use common multiples to express fractions in the same denomination | I can, with help, use multiplication to change the denomination of a fraction. | I can use multiplication to change the denomination of a fraction. | I can identify common multiples to convert 2 fractions to the same denomination. |
| Relate thousandths to decimal equivalents | *Covered by other targets* | Consolidate understanding of the relation between tenths, hundredths and thousandths and decimal notation | *Covered by other targets* |
| Read and write decimal numbers as fractions | I can convert decimals with 1 and 2 places, into fractions. | I can convert decimals, up to 3 places, into fractions | I can convert decimals into simplified fractions. | Calculate decimal fraction equivalents for a simple fraction | I can convert fractions into decimals where I have to change the denominator to 10. | I can convert fractions to decimals where I have to change the denominator to 10, 100 or 1000. | I can convert any fraction to a decimal by dividing the numerator by the denominator. |
| Write percentages as a fraction with denominator hundred, and as a decimal | I can, with help, convert percentages to fractions with a denominator of 100, and decimals. | I can convert percentages to fractions with a denominator of 100, and decimals. | I can convert percentages to simplified fractions and decimals. | Consolidate understanding of the connection between fractions, decimals and percentages | I can draw diagrams to explain why some simple fractions, decimals and percentages are equivalent. | I can draw diagrams to explain why fractions, decimals and percentages are equivalent. | I can explain why fractions, decimals and percentages are equivalent. |
| Know percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25 | I can write the decimal and percentage equivalents for ½, ¼ and ¾. | I can write the decimal and percentage equivalents for fractions with a denominator of 5, 10 or 25. | I can work out which fractions can be written as whole number percentages. | Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts | I can write the decimal and percentage equivalents for 1/3 and 2/3. | I can recall the decimal and percentage equivalents for fractions in different contexts. | I can recall the decimal and percentage equivalents for fractions, and select the most appropriate form for a context. |
|  |  |  |  | RATIO Solve problems involving the calculation of percentages and the use of percentages for comparison. | I can find percentages of amounts. | I can solve problems comparing percentages and fractions of amounts. | I can increase amounts by a percentage. |
| Compare and order fractions whose denominators are all multiples of the same number | I can order fractions by size with different denominators that are simply related. | I can order fractions by size with different denominators which are multiples of the same number. | I can apply my knowledge of how to order fractions by size with different denominators to solve problems. | Compare and order fractions, including fractions >1 | I can order proper and improper fractions by size with different denominators that are simply related. | I can order proper and improper fractions by size with different denominators. | I can explain how to order fractions by size with different denominators. |
| Add and subtract fractions with the same denominator and denominators that are multiples of the same number, including calculations >1 | I can add and subtract fractions with different denominators that are simply related. | I can add and subtract fractions with different denominators which are multiples of the same number. | I can apply my knowledge of how to add and subtract fractions with different denominators to solve problems | Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions | I can add and subtract fractions and mixed numbers with different denominators that are simply related. | I can add and subtract fractions and mixed numbers with different denominators. | I can solve multi-step calculations involving fractions with different denominators. |
| Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams | I can multiply fractions by a whole number. | I can multiply fractions and mixed numbers by a whole number. | I can apply my knowledge of how to multiply fractions with a whole number to solve problems | Multiply simple pairs of proper fractions | I can, with help, multiply simple pairs of fractions. | I can multiply simple pairs of fractions. | I can explain how to multiply pairs of fractions together. |
|  |  |  |  | Divide proper fractions by whole numbers | I can, with help, divide fractions by a whole number. | I can divide fractions by a whole number. | I can explain how to divide a fraction by a whole number. |
| Round decimals with two decimal places to the nearest whole number and to one decimal place | I can round decimals with 2 decimal places to the nearest whole number. | I can round decimals with 2 decimal places to the nearest tenth and whole number. | I can explain what I am doing when I am rounding decimals to the nearest tenth and whole number. | Round decimals to three decimal places or other approximations depending on the context | I can round decimals with 3 decimal places to the nearest hundredth. | I can round decimals to the required approximation. | I can explain why I should round to a certain number of decimal places when working in a given context, for example, to 2 places for money. |
| Read, write, order and compare numbers with up to three decimal places |  | I can order numbers with decimals up to 3 places. | I can explain how to order numbers with decimal by size. | Use written division methods in cases where the answer has up to two decimal places | I can use the short division method to divide 4-digit numbers, turning a remainder into a decimal. | I can use the long division method to divide numbers, turning a remainder into a decimal. | I can use the context of a problem to work out how many decimal places to convert a remainder into when dividing. |
| Add and subtract decimals including those with a different number of decimal places | I can add and subtract numbers with the same number of decimal places. | I can add and subtract numbers with a different number of decimal places. | I can apply my understanding of adding and subtracting decimals to solve problems. | Multiply one-digit numbers with up to two decimal places by whole numbers | I can multiply 1-digit numbers with 1-decimal place by 2-digit numbers. | I can multiply 1-digit numbers with 2 decimal places by 2-digit numbers. | I can multiply 2-digit numbers with 2 decimal places by 2-digit numbers. |
| Solve a variety of problems involving fractions | *Covered by other targets* | Multiply a quantity that represents a unit fraction to find the whole quantity | *Covered by other targets* |
| Solve problems involving addition and subtraction involving numbers up to three decimal places | *Covered by other targets* | Solve problems which require decimal answers to be rounded to specified degrees of accuracy | *Covered by other targets* |
| Solve problems which require knowing key percentage and decimal equivalents | *Covered by other targets* | Solve problems with FDP from the Year 6 curriculum | *Covered by other targets* |