National Curriculum Maths - Unit 2

Level 1 Unit 2 - Mathematical Number and Alegbra

1. The learner will handle arithmetic operations, reading and writing the number symbols and solving practical problems involving up to 10 objects

1.1 I can count whole numbers to twenty [1]

1.2 I can put the numbers from one to twenty in order [2]

1.3 I can add and subtract to solve problems involving up to 10 objects [3]

1.4 I can read numbers from one to ten and their written names [4]

1.5 I can write numners from one to ten and their names [5]

Level 2 Unit 2 - Mathematical Number and Alegbra

1. The learner will handle arithmetic operations in practical contexts using mental recall and an appreciation that subtraction is the inverse of addition

1.1 I can count sets of objects reliably with up to 100 objects [7]

1.2 I can use mental recall of addition and subtraction facts to 10 [8]

1.3 I can say how many tens and how many units make up a 2 digit number [9]

1.4 I can identify when to add and when to subtract [10]

1.5 I can use subtraction to get back to an original number after there has been addition [11]

1.6 I can work out simple problems involving money and measures in my head [12]

1.7 I can identify simple sequences of numbers from the properties of the individual numbers [13]

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Level 3 Unit 2 - Mathematical Number and Alegbra

1. The learner will use the 4 arithmetic operators on integers up to 1000 and mental recall of associated number facts in simple cases.

1.1 I can add and subtract numbers with 2 digits in my head [15]

1.2 I can add and subtract numbers with 3 digits using pencil and paper [16]

1.3 I can recall 2,3,4,5, and 10 times tables [17]

1.4 I can use my knowledge of multiplication tables to do simple division problems [18]

1.5 I can identify the size of a number from its place value [19]

1.6 I can make simple approximations [20]

1.7 I can identify and write simple decimals and fractions [21]

1.8 I can identify negative numbers in the contexts of money and temperature [22]

1.9 I can identify when two fractions are equivalent [23]

Level 4 Unit 2 - Mathematical Number and Alegbra

1. The learner will solve number problems using a range of methods including mental and written methods checking results using approximations. They can describe simple mathematical realtionships in words

1.1 I can multiply and divide whole numbers by 10 or 100 [25]

1.2 I can use a range of mental methods of computation involving the four operaters [26]

1.3 I can mentally recall multiplication facts up to 10 x 10 and corresponding division facts [27]

1.4 I can use efficient written methods of addition and subtraction and of short multiplication and division [28]

1.5 I can recognise approximate proportions of a whole and use simple fractions and

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percentages to describe these [29]

1.6 I can use simple formulae expressed in words [30]

Level 5 Unit 2 - Mathematical Number and Alegbra

1. The learner will solve number problems involving fraction, decimals and negative numbers using a range of methods. They can solve simple problems involving ratios and construct simple formulae to describe mathematical relationships.

1.1 I can multiply and divide whole numbers and decimals [32]

1.2 I can order, add and subtract negative numbers in context [33]

1.3 I can use all four operations with decimals to two places [34]

1.4 I can solve simple problems involving ratio and direct proportion [35]

1.5 I can calculate fractional or percentage parts of quantities and measurements, using a calculator where appropriate [36]

1.6 I can construct, express in symbolic form and use simple formulae involving one or two operations [37]

1.7 I can use brackets appropriately [38]

1.8 I can use and interpret coordinates in all four quadrants [39]

Level 6 Unit 2 - Mathematical Number and Alegbra

1. The learner will use a range of techniques to support solving linear equations and mapping algebraic functions with cartesian co-ordinates for paractical purposes

1.1 I can use trial and improvement methods to order and approximate decimals when solving numerical problems and equations [41]

1.2 I can evaluate one number as a fraction or percentage of another [42]

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1.3 I can describe and use the equivalences between fractions, decimals and percentages [43]

1.4 I can calculate using ratios in appropriate situations [44]

1.5 I can add and subtract fractions by writing them with a common denominator [45]

1.6 I can find and describe in words the rule for the next term or nth term of a sequence where the rule is linear [46]

1.7 I can formulate and solve linear equations with whole-number coefficients [47]

1.8 I can represent mappings expressed algebraically using Cartesian coordinates, interpreting general features [48]

Level 7 Unit 2 - Mathematical Number and Alegbra

1. The learner will use a range of methods to support solving linear simultaneous equations and describing qudratic series

1.1 I can make estimates and round values to one significant figure [50]

1.2 I can and multiply and divide mentally [51]

1.3 I can describe the effects of multiplying and dividing by numbers between 0 and 1 [52]

1.4 I can solve numerical problems involving multiplication and division with numbers of any size, using a calculator efficiently and appropriately [53]

1.5 I can explain and use proportional changes, calculating the result of any proportional change using only multiplicative methods [54]

1.6 I can find and describe in symbols the next term or nth term of a sequence where the rule is quadratic [55]

1.7 I can use algebraic and graphical methods to solve simultaneous linear equations in two variables [56]

Level 8 Unit 2 - Mathematical Number and Alegbra

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1. The learner will use a range of methods to support solving more complex mathematical problems involving algebraic functions and inequalities. They will use graphical methods to model real and hypothetical situations that can be described by polynomial functions

1.1 I can solve problems that involve calculating with powers, roots and numbers expressed in standard form [58]

1.2 I can identify when to use fractions or percentages to solve problems involving repeated proportional changes or the calculation of the original quantity given the result of a proportional change [59]

1.3 I can evaluate algebraic formulae or calculate one variable, given the others, substituting fractions, decimals and negative numbers [60]

1.4 I can manipulate algebraic formulae, equations and expressions, finding common factors and multiplying two linear expressions [61]

1.5 I can solve inequalities in two variables [62]

1.6 I can sketch and interpret graphs of linear, quadratic, cubic and reciprocal functions, and graphs that model real situations [63]

Level 9 Exceptional Performance Unit 2 - Mathematical Number and Alegbra

1. The learner will use a range of analytical mathematical methods to solve increasingly complex mathematical problems involving rational and irrational numbers, graphical methods and quadratic functions

1.1 I can explain and use rational and irrational numbers [65]

1.2 I can determine the bounds of intervals [66]

1.3 I can explain and use direct and inverse proportion [67]

1.4 I can simplify algebraic expressions [68]

1.5 I can use rules of indices for negative and fractional values [69]

1.6 I can express general laws in symbolic form [70]

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1.7 I can find formulae that approximately connect data eg using graphical methods [71]

1.8 I can solve simultaneous equations in two variables where one equation is linear and the other is quadratic [72]

1.9 I can solve problems using intersections and gradients of graphs [73]

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