

KS3 Assessment Rubric – MATHS – NUMBER & ALGEBRA

Year 7

Working Towards Age Expectations	Working At Age Expectations	Working Above Age Expectations
<ul style="list-style-type: none"> • Pupils show understanding of place value in numbers up to 1000 and use this to make approximations. • They begin to use decimal notation, in the context of measures and money, and to recognise negative numbers in practical contexts such as temperature. • Pupils use mental recall of addition and subtraction facts to 20 in solving problems involving larger numbers. • They add and subtract numbers with two digits mentally and numbers with three digits using written methods. • They use mental recall of the 2, 3, 4, 5 and 10 multiplication tables and derive the associated division facts. • They solve whole-number problems involving multiplication or division including those that give rise to remainders. • They use simple fractions that are several parts of a whole and recognise when two simple fractions are equivalent. 	<ul style="list-style-type: none"> • Pupils use their understanding of place value to mentally multiply and divide whole numbers by 10 or 100. • When solving number problems, they use a range of mental methods of computation with the four operations, including mental recall of multiplication facts up to 10 x 10 and quick derivation of corresponding division facts. • They select efficient strategies for addition, subtraction, multiplication and division. • They recognise approximate proportions of a whole and use simple fractions and percentages to describe these. • They begin to use simple formulae expressed in words. 	<ul style="list-style-type: none"> • Pupils use their understanding of place value to multiply and divide whole numbers and decimals. • They order, add and subtract negative numbers in context. • They use all four operations with decimals to two places. • They solve simple problems involving ratio and direct proportion. • They calculate fractional or percentage parts of quantities and measurements, using a calculator where appropriate. • They construct, express in symbolic form and use simple formulae involving one or two operations. • They use brackets appropriately. • They use and interpret coordinates in all four quadrants.

Year 8

Working Towards Age Expectations	Working At Age Expectations	Working Above Age Expectations
<ul style="list-style-type: none"> • Pupils use their understanding of place value to mentally multiply and divide whole numbers by 10 or 100. • When solving number problems, they use a range of mental methods of computation with the four operations, including mental recall of multiplication facts up to 10 x 10 and quick derivation of corresponding division facts. • They select efficient strategies for addition, subtraction, multiplication and division. • They recognise approximate proportions of a whole and use simple fractions and percentages to describe these. • They begin to use simple formulae expressed in words. 	<ul style="list-style-type: none"> • Pupils use their understanding of place value to multiply and divide whole numbers and decimals. • They order, add and subtract negative numbers in context. • They use all four operations with decimals to two places. • They solve simple problems involving ratio and direct proportion. • They calculate fractional or percentage parts of quantities and measurements, using a calculator where appropriate. • They construct, express in symbolic form and use simple formulae involving one or two operations. • They use brackets appropriately. • They use and interpret coordinates in all four quadrants. 	<ul style="list-style-type: none"> • Pupils order and approximate decimals when solving numerical problems and equations, using trial and improvement methods. • They evaluate one number as a fraction or percentage of another. • They understand and use the equivalences between fractions, decimals and percentages, and calculate using ratios in appropriate situations. • They add and subtract fractions by writing them with a common denominator. • They find and describe in words the rule for the next term or nth term of a sequence where the rule is linear. • They formulate and solve linear equations with whole-number coefficients. • They represent mappings expressed algebraically, and use Cartesian coordinates for graphical representation interpreting general features.

Year 9

Working Towards Age Expectations	Working At Age Expectations	Working Above Age Expectations
<ul style="list-style-type: none"> ● Pupils use their understanding of place value to multiply and divide whole numbers and decimals. ● They order, add and subtract negative numbers in context. ● They use all four operations with decimals to two places. ● They solve simple problems involving ratio and direct proportion. ● They calculate fractional or percentage parts of quantities and measurements, using a calculator where appropriate. ● They construct, express in symbolic form and use simple formulae involving one or two operations. ● They use brackets appropriately. ● They use and interpret coordinates in all four quadrants. 	<ul style="list-style-type: none"> ● Pupils order and approximate decimals when solving numerical problems and equations, using trial and improvement methods. ● They evaluate one number as a fraction or percentage of another. ● They understand and use the equivalences between fractions, decimals and percentages, and calculate using ratios in appropriate situations. ● They add and subtract fractions by writing them with a common denominator. ● They find and describe in words the rule for the next term or nth term of a sequence where the rule is linear. ● They formulate and solve linear equations with whole-number coefficients. ● They represent mappings expressed algebraically, and use Cartesian coordinates for graphical representation interpreting general features. 	<ul style="list-style-type: none"> ● When making estimates, pupils round to one significant figure and multiply and divide mentally. ● They understand the effects of multiplying and dividing by numbers between 0 and 1. ● They solve numerical problems involving multiplication and division with numbers of any size, using a calculator efficiently and appropriately. ● They understand and use proportional changes, calculating the result of any proportional change using only multiplicative methods. ● They find and describe in symbols the next term or nth term of a sequence where the rule is quadratic. ● They use algebraic and graphical methods to solve simultaneous linear equations in two variables.