

# Mathematics Assessment

## Year 5 Meeting Expectations

Name: \_\_\_\_\_

Number/Place Value			
Count forwards and backwards in steps of power 10 for any given number up to 1,000,000			
Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit			
Determine the value of each digit numbers to at least 1 000 000			
Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero			
Round any number to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000			
Round decimals with 2dp to the nearest whole number and to 1 decimal place			
Recognise and use square numbers and cube numbers and the notation for squared ( $^2$ ) and cubed ( $^3$ )			
Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.			

Multiplication and Division			
Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers			
Establish whether a number up to 100 is prime and recall prime numbers up to 19			
Multiply and divide numbers mentally drawing upon known facts up to $12 \times 12$			
Multiply and divide whole numbers by 10, 100 and 1000			
Multiply and divide numbers involving decimals by 10, 100 and 1000			
Multiply number up to 4-digit by a 1 or 2-digit number using formal written methods, including long multiplication for 2-digit numbers			
Divide numbers up to 4-digits by 1-digit numbers			
Solve problems involving multiplication and division where large numbers are used by decomposing them into factors.			
Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3);			

Addition and Subtraction			
Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why; solve problems involving 3 decimal places			
Add and subtract numbers mentally with increasingly large numbers			
Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy			
Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)			

# Mathematics Assessment Year 5 Meeting Expectations

Name: \_\_\_\_\_



Fractions, decimals and percentages			
Recognise mixed numbers and improper fractions and convert from one to the other			
Read and write decimal numbers as fractions, for example, $0.47 = 47/100$			
Recognise the per cent symbol (%) and understand per cent relates to number of parts per hundred			
Write percentages as a fraction with denominator hundred, and as a decimal fraction			
Compare and order fractions whose denominators are all multiples of the same number			
Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths			
Add and subtract fractions with the same denominator and denominators that are multiples of the same number			
Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams			
Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents			
Round decimals with two decimal places to the nearest whole number and to one decimal place			
Read, write, order and compare numbers with up to three decimal places			
Solve problems involving number up to three decimal places			

Measure			
Know angles are measured in degrees: estimate and compare acute; obtuse and reflex angles			
Draw given angles and measure them in degrees ( $^{\circ}$ )			
Convert between different units of metric measures and estimate volume and capacity			
Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres			
Calculate and compare the area of squares and rectangles including using standard units ( $\text{cm}^2$ and $\text{m}^2$ )			
Estimate volume and capacity			
Solve problems involving converting between units of time			
Use all four operations to solve problems involving measure, for example, length, mass, volume, money, using decimal notation, including scaling			

Statistics			
Solve comparison, sum and difference problems using information presented in a line graph			
Complete, read and interpret information in tables, including timetables.			

# Mathematics Assessment Year 5 Meeting Expectations

Name: \_\_\_\_\_



## Geometry - Position and direction

Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

## Geometry – Properties of Shape

Identify 3-D shapes, including cubes and other cuboids, from 2-D representations

Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angle

Draw given angles, and measure them in degrees

Identify angles at a point and one whole turn

Identify angles at a point on a straight line and  $\frac{1}{2}$  a turn

Identify other multiples of  $90^\circ$

Use the properties of rectangles to deduce related facts and find missing lengths and angles

Distinguish between regular and irregular polygons based on reasoning about equal sides and angles

# Mathematics Assessment Year 5 Working at greater depth

## Expectations

Name: \_\_\_\_\_



Greater Depth Expectations			
Have a concept of numbers well beyond 1,000,000 and use them in context: e.g. distances to planets; historical data and geographical aspects			
Divide whole numbers (up to 4 digits) by 2-digit numbers, using preferred method			
Use rounding as a strategy for quickly assessing what approximate answers ought to be before calculating			
Link working across zero for positive and negative numbers to real life contexts			
Recognise the symbol for square root ( $\sqrt{\quad}$ ) and work out square roots for numbers up to 100			
Calculate number problems algebraically, for example, $2x - 3 = 5$			
Use knowledge of measurement to create plans of real life environments, such as classroom, field, outside play area			
Relate imperial measures still used regularly in our society to their metric equivalents, for example, miles to Km and lbs to Kg			
Use a range of timetables to work out journey times on a fictional journey around the world, for example, 'How long would it take to reach the rainforests in the Amazon?'			
Collect own data on personal project and present information in formats of their choosing, charts, graphs and tables			
Use the four operations to solve more complex problems involving scaling by simple fractions			

## Times tables at St Mary's

Across the school we expect the majority of pupils to achieve the following standards –

- YR – Begin to count in steps – 1's, 2's and 10's
- Y1 – Be able to count in steps of 1, 2, 5 and 10 confidently to the 10th term
- Y2 – To know their 2, 5, and 10 times tables (as times tables not as counting)
- Y3 – To know their 3, 4, and 8 times tables (consolidate previous as well)
- Y4 – Consolidation and move onto the 6, 7, 9, 11 and 12 times tables
- Y5/6 – Consolidation and application

By ensuring this we are preparing the children to work with longer calculations and use written methods competently.