**Assessing Key Understandings in Mathematics Key Understandings – Y6**

• Pupils represent and explain the relationship between decimals, fractions, percentages and ratio and use their understanding to solve problems.

• Pupils represent and explain addition and subtraction problems involving fractions with different denominators, decimals (beyond two decimal points) and calculating the interval across zero in different contexts (including extracting information from graphs, charts, timetables and measuring scales). They solve these problems by taking account of the numbers involved, appropriately choosing mental or column methods using what they know and understand, explaining their decisions and justifying their solutions and level of accuracy.

• Pupils represent and explain multiplication, division and ratio problems (including up to four-digit numbers by two-digit numbers, fractions and decimals) in different contexts (including converting between metric and imperial measures). They solve these problems by taking account of the numbers and their properties (square, prime common multiples etc.) involved, appropriately choosing mental or formal written methods and using what they know and understand, explaining their decisions and justifying their solutions and level of accuracy.

• Pupils represent and explain multi-step problems involving addition, subtraction, multiplication and division in different contexts (including finding the mean). They solve these problems by taking account of the numbers involved and the order of operations, explaining their decisions and justifying their solutions.

• Pupils represent and explain how to find the volume of cubes and cuboids and use their understanding of properties of shapes (including circles), area and volume to solve problems.

• Pupils represent and explain positions on a grid with four quadrants and how to reflect and translate shapes and use this knowledge and understanding to solve problems.

• Pupils recognise 3D shapes represented in different ways (including as 2D drawings and nets) and can draw accurate 2D shapes using given information (including to form nets) explaining and justifying their thinking.

• Pupils explain the use of letters to represent relationships, variables and unknowns in familiar additive, multiplicative and geometric situations and use their understanding to solve problems involving letters.