

## Year 5 Mathematics

### Number, place value, approximation and estimation/rounding

1. I can count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.
2. I can read, write, order and compare numbers to at least 1,000,000.
3. I can determine the value of each digit in numbers up to 1,000,000.
4. I can read Roman numerals to 1,000 (M) and recognise years written in Roman numerals.
5. I can round any number up to 1,000,000 to the nearest 10, 100, 1000, 10000 and 100000.
6. I can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.
7. I can solve number problems and practical problems with the above.

### Calculations

8. I can add and subtract numbers mentally with increasingly large numbers.
9. I can add and subtract whole numbers with more than 4 digits, including using formal written methods.
10. I can use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.
11. I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

12. I can identify multiples and factors, including finding all factor pairs or a number and common factor pairs of two numbers.
13. I use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.
14. I can establish whether a number up to 100 is prime and recall prime numbers up to 19.
15. I recognise and use square numbers and cube numbers, and the notation for squared and cubed.
16. I can multiply and divide numbers mentally drawing on known facts.
17. I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
18. I can multiply numbers up to 4 digits by a 1-digit or 2-digit number using a formal written method, including long multiplication for 2-digit numbers.
19. I can divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context.
20. I can solve problems involving multiplication and division including using knowledge of factors and multiples, squares and cubes.
21. I can solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.
22. I can solve problems involving multiplication and division including scaling by simple fractions and problems involving simple rates.

## **Fractions, decimals and percentages**

- 23.I can recognise mixed numbers and improper fractions and convert from one form to the other.
- 24.I can write mathematical statements  $>1$  as a mixed number.
- 25.I can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.
- 26.I can compare and order fractions whose denominators are multiples of the same number.
- 27.I can add and subtract fractions with the same denominator and denominators that are multiples of the same number.
- 28.I can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
- 29.I can read and write decimal numbers as fractions.
- 30.I recognise and can use thousandths and relate them to tenths, hundredths and decimal equivalents.
- 31.I can round decimals with 2 decimal places to the nearest whole number and 1 decimal place.
- 32.I can read, write, order and compare numbers with up to 3 decimal places.
- 33.I can solve problems involving numbers up to 3 decimal places.
- 34.I recognise the percent symbol and understand that percent relates to 'number parts per hundred'.
- 35.I can write percentages as a fraction with denominator hundred, and as a decimal.
- 36.I can solve problems which require knowing percentage and decimal equivalents of  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{2}{5}$ ,  $\frac{4}{5}$  and those fractions with a denominator or a multiple of 10 or 25.

## **Measurement**

- 37.I can solve problems involving converting between units of time.
- 38.I can convert between different units of metric measure.
- 39.I understand and use approximate equivalences between metric units and common imperial units, such as inches, pounds and pints.
- 40.I can measure and calculate the perimeter of composite rectilinear shapes in cm and m.
- 41.I can calculate and compare the area of rectangles (incl squares), and including using standard units ( $\text{cm}^2$  and  $\text{cm}^3$ ) to estimate the area of irregular shapes.
- 42.I can estimate volume and capacity.
- 43.I can use all four operations to solve problems involving money using decimal notation, including scaling.

## **Geometry - properties of shapes**

- 44.I can use the properties of rectangles to deduce related facts and find missing lengths and angles.
- 45.I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
- 46.I can identify 3D shapes, including cubes and other cuboids, from 2D representations.
- 47.I know angles are measured in degrees.
- 48.I can estimate and compare acute, obtuse and reflex angles.
- 49.I can identify angles at a point and one whole turn.
- 50.I can identify angles at a point on a straight line and  $\frac{1}{2}$  a turn.
- 51.I can identify other multiples of  $90^\circ$ .
- 52.I can draw given angles and measure them in degrees.

### **Geometry - position and direction**

53.I can 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.

### **Statistics**

54.I can complete, read and interpret information in tables, including timetables.

55.I can solve comparison, sum and difference problems using information presented in a line graph.