**CJS Year 4 Maths overview**

Autumn 1

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| **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** | **Week 8** |
| **Assessment**Make flashcards of important Y3 facts.Presentation in books.Counting.Number bonds to 10, 20 and 100.Days in each monthDays in a year and leap year | **Place value*** Partition 4 digit numbers into ThHTO (counters, bar model).
* Partition 4 digit numbers in different ways (counters, bar model).
* Solve balancing equations with partitioning numbers in different ways.
* Position of ThHTO on a number line with benchmarks labelled.
* Position of ThHTO on a number line with only two benchmarks.
* Position of the same ThHTO on differently benchmarked number lines.

**Counting*** Counting in 1000s from any number.
* Adding / subtracting O, T, H, Ths crossing boundaries by using counters on a place value grid and exchanging.

**Comparing and ordering*** Saying which is bigger / smaller out of two ThHTO numbers, represented in different ways (concrete, pictorial and abstract).
* Using < and > to show the relative size of two ThHTO numbers.
* Saying which is bigger / smaller out of three+ ThHTO numbers represented in different ways (concrete, pictorial and abstract).

**Rounding*** Say which multiples of O, T, H and Th a number lies between.
* Place numbers between multiples of O, T, H and Th on a number line.
* Round numbers to the nearest T, H and Th.
* Say which numbers could have been rounded to a given multiple of T, H or Th.
* Say all possibilities of a number that could have been rounded to a given multiple of 10.
* Say the biggest and smallest possible number that could have been rounded to a given multiple of H and Th..
 | **Addition and subtraction*** Add and subtract multiples of 1000
* ThHTO +- 0 crossing 10.
* ThHTO +- O, generating 4 addition and subtraction statements. Whole and part unknown questions. Missing number questions.
* ThHTO +-multiple of 10 crossing 100.
* ThHTO +- multiple of 10, generating 4 addition and subtraction statements. Whole and part unknown questions. Missing number questions.
* ThHTO +- multiple of 100 crossing 1000.
* ThHTO +- multiple of 100, generating 4 addition and subtraction statements. Whole and part unknown questions. Missing number questions.
* THTO +- TO crossing 10 or 100.
* ThHTO +- TO, generating 4 addition and subtraction statements. Whole and part unknown questions. Missing number questions.
* ThHTO +- HTO crossing 10, 100 or 1000.
* ThHTO +- HTO, generating 4 addition and subtraction statements. Whole and part unknown questions. Missing number questions.
* ThHTO +- ThHTO crossing 10, 100, 1000 or 10,000.
* ThHTO +- ThHTO, generating 4 addition and subtraction statements. Whole and part unknown questions. Missing number questions.
* ThHTO +– ThHTO using concrete materials, no exchange then exchange.
* ThHTO +– ThHTO using pictorial method, no exchange then exchange.
* ThHTO +– ThHTO using expanded column method, no exchange.
* ThHTO +– ThHTO using expanded column method, exchange in ones only.
* ThHTO +– ThHTO using expanded column method, exchange in tens only.
* ThHTO +– ThHTO using expanded column method, exchange in hundreds only.
* ThHTO +– ThHTO using expanded column method, exchange in ones, tens and hundreds.
* THHTO +– ThHTO using contracted column method, no exchange.
* ThHTO +– ThHTO using contracted column method, exchange in ones only.
* ThHTO +– ThHTO using contracted column method, exchange in tens only.
* ThHTO +– ThHTO using contracted column method, exchange in hundreds only.
* ThHTO +– ThHTO using contracted column method, exchange in ones, tens and hundreds.
* Missing number problems (whole and part unknown) ThHTO +-ThHTO.
* Balancing equations (whole and part unknown) ThHTO +- ThHTO.
* Number problem solving
* Sort worded problems based on whether the whole or a part is unknown.
* Break two step problems into the first and second calculation needed based on whether the whole or part is unknown.
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Autumn 2

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| **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** |
| **6 and 7 times table*** Count forwards and backwards in 6s and 60s, 7s and 70s.
* Classify numbers based on whether they are multiples of 6 and 7 or not.
* Multiply TO by 6 and 7 using base 10 or place value counters with no exchange.
* Multiply TO by 6 and 7 using a grid method with no exchange.
* Multiply TO by 6 and 7 using base 10 or place value counters with exchange.
* Multiply TO by 6 and 7 using a grid method with exchange.
* Commutative law for 6 and 7 times table.
* Bar modelling and number line representation for multiplying by 6 and 7 (whole, number of parts, size of each parts).
* Generate 4 multiplication and division statements from a bar model.
* Dividing by 6 and 7 by counting in 6s or 7s with no remainders.
* Dividing by 6 and 7 by splitting the whole into 6 and 7 groups with no remainders.
* Dividing by 6 and 7 by counting in 6s and 7s with remainders.
* Dividing by 6 and 7 by splitting the whole into 6 and 7 groups with remainders.
* Divide TO by 6 and 7 by chunking.
* Sort missing number calculations based on whether the whole, size of each part or number of parts is unknown.
* Solve missing number problems.
* Solve other problems related to multiples of 6 and 7.
* Sort worded problems based on whether the whole, number of parts or size of each part is unknown, then solve.
* Break two step problems into the first and second calculation needed based on whether the whole, number of parts or size of each part is unknown.
 | **25 times table*** Count forwards and backwards in 25s.
* Classify numbers based on whether they are multiples of 25 or not.
* Multiply numbers by 25.
* Commutative law for 25 times table.
* Bar modelling and number line representation for multiplying by 25 (whole, number of parts, size of each parts).
* Generate 4 multiplication and division statements from a bar model.
* Dividing by 25 by counting in 25s with no remainders.
* Dividing by 25 by counting in 25s with remainders.
* Sort missing number calculations based on whether the whole, size of each part or number of parts is unknown.
* Solve missing number problems.
* Solve other problems related to multiples of 25.
* Sort worded problems based on whether the whole, number of parts or size of each part is unknown, then solve.
* Break two step problems into the first and second calculation needed based on whether the whole, number of parts or size of each part is unknown.
 | **Statistics – pictograms**NB: Use pictograms with values that reinforce recent times tables work.* Read the value of pictograms with whole pictures.
* Read the value of pictograms with half pictures.
* Read the value of pictograms with quarter pictures.
* Draw whole pictures on pictograms.
* Draw half pictures on pictograms.
* Draw quarter pictures on piotograms.
* Problems involving adding the value of pictures.
* Problems involving find the difference between the values of pictures.
* Make comparisons between pictures (how many more / fewer…?).
 | **Measuring length*** Measure length in metres, including to one decimal place.
* Estimate length to the nearest metre.
* Measure length using a ‘broken ruler’.
* Add lengths in metres.
* Subtract lengths in metres.
* Compare lengths in metres.
* Generate 4 addition and subtraction statements.
* Missing number questions where the whole or a part is unknown.
* Measure length in centimetres, including decimals.
* Estimate length to the nearest centimetre.
* Measure length using a ‘broken ruler’.
* Add lengths in centimetres.
* Subtract lengths in centimetres.
* Compare lengths in centimetres.
* Generate 4 addition and subtraction statements.
* Missing number questions where the whole or a part is unknown.
* Measure length in millimetres.
* Estimate length in millimetres.
* Measure length using a ‘broken ruler’.
* Add lengths in millimetres.
* Subtract lengths in millimetres.
* Compare lengths in millimetres.
* Generate 4 addition and subtraction statements.
* Missing number questions where the whole or a part is unknown.
* Sort worded problems based on whether the whole or a part is unknown.
* Break two step problems into the first and second calculation needed based on whether the whole or part is unknown.
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Spring 1

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| **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** |
| **Perimeter*** Count the perimeter of rectangles on a grid.
* Count the perimeter of rectilinear shapes on a grid.
* Draw rectangles on a grid with a given perimeter.
* Draw rectilinear shapes on a grid with a given perimeter.
* Calculate the perimeter of rectangles where all sides are labelled.
* Work out unlabelled side lengths in rectangles.
* Calculate the perimeter of rectangles where two adjacent sides are labelled.
* Calculate the perimeter of rectilinear shapes where all sides are labelled.
* Work out unlabelled side lengths in rectilinear shapes.
* Calculate the perimeter of rectilinear shapes where some sides are labelled.
* Measure the perimeter of rectangles.
* Measure the perimeter of rectilinear shapes.
 | **Statistics – tables*** Read information on two way tables.
* Fill in information on two way tables.
* Problems involving adding the value of fields in a two way table.
* Problems involving finding the difference between values of fields in two way tables.
* Make comparisons between values of fields in two way tables.
* Fill in unknown fields using addition and subtraction of known fields.
 | **Telling the time - analogue*** Tell the time using a straight number line and one arrow (o’clock / half past / quarter past / quarter to).
* Estimate the time using a straight number line and one arrow with quarter hour benchmarks labelled.
* Estimate the time using a straight number line and one hour with only hour benchmarks labelled.
* Tell the time using a clock and only the hour hand.
* Tell the time using a clock with the hour hand and the minute hand to 5 minutes.
* Tell the time using a clock with the hour hand and the minute hand to 1 minute.
 | **Converting between minutes and hours*** Count forwards and backwards in 60s.
* Count forwards and backwards in 30s.
* Count forwards and backwards in 15s.
* Convert multiples of one hour to minutes.
* Convert multiples of half an hour to minutes.
* Convert multiples of quarter of an hour to minutes.
* Convert multiples of 60 minutes to hours.
* Convert multiples of 30 minutes to hours.
* Convert multiples of 15 minutes to hours.
* Convert multiples of 1 minute to hours.
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Spring 2

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| **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** |
| **11 and 12 times table*** Count forwards and backwards in 11s and 110s, 12s and 120s.
* Classify numbers based on whether they are multiples of 11 and 12 or not.
* Bar modelling and number line representation for multiplying by 11 and 12 (whole, number of parts, size of each parts).
* Generate 4 multiplication and division statements from a bar model.
* Dividing by 11 and 12 by counting in 11s or 12s with no remainders.
* Dividing by 11 and 12 by splitting the whole into 11 and 12 groups with no remainders.
* Dividing by 11 and 12 by counting in 11s and 12s with remainders.
* Dividing by 11 and 12 by splitting the whole into 11 and 12 groups with remainders.
* Divide TO by 11 and 12 by chunking.
* Sort missing number calculations based on whether the whole, size of each part or number of parts is unknown.
* Solve missing number problems.
* Solve other problems related to multiples of 11 and 12.
* Sort worded problems based on whether the whole, number of parts or size of each part is unknown, then solve.
* Break two step problems into the first and second calculation needed based on whether the whole, number of parts or size of each part is unknown.
 | **Area*** Find the area of rectangles by counting squares.
* Find the area of rectilinear shapes by counting squares.
* Find the area of rectangles by counting rows or columns.
* Calculate the area of rectangles by multiplying adjacent sides.
* Calculate an unknown side of a rectangle by dividing the area by the known side.
* Calculate the area of compound rectilinear shapes by working out the area of each rectangle and adding them together.
* Estimate the area of rectangles where only one side’s length is labelled.
 | **Converting between seconds and minutes*** Count forwards and backwards in 60s.
* Count forwards and backwards in 30s.
* Count forwards and backwards in 15s.
* Convert multiples of one minute to seconds.
* Convert multiples of half a minute to seconds.
* Convert multiples of 60 seconds to minutes.
* Convert multiples of 30 seconds to minutes.
* Convert multiples of 15 seconds to minutes.
* Convert multiples of 1 second to minutes.
 | **Statistics – bar charts*** Read the value of bar charts where each interval is labelled.
* Read the value of bar charts where alternate intervals are labelled.
* Read the value of bar charts where alternate intervals are labelled and bars fall half way between a labelled and unlabelled interval.
* Draw bars on a chart with every interval labelled.
* Draw bars on a chart with alternate intervals labelled.
* Draw bars on a chart where alternate intervals are labelled and bars must fall half way between a labelled and unlabelled interval.
* Problems involving adding the value of bars.
* Problems involving find the difference between the values of bars.
* Make comparisons between bars (how many more / fewer…?).
 | **Digital time*** Write the time as hours: minutes.
* Use 12 hour time with am / pm notation.
* Write 24 hour time.
* Convert from analogue to digital time.
* Convert from digital to analogue time.
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Summer 1

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| **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** |
| **Fractions*** Find fractions of equivalent value by folding paper and cutting objects.
* Find fractions of equivalent value by drawing bar models and halving parts.
* Find fractions of equivalent value by reading a fraction wall.
* Show which unit fraction is bigger or by shading a picture or drawing own bar model.
* Show which fraction (with the same denominator) is bigger or smaller by shading or drawing own bar model.
* Order three or more unit fractions by shading pictures or drawing own bar model.
* Order 3 or more fractions with the same denominator by shading pictures of drawing own bar model.
* Add and subtract fractions with the same denominator within and up to one whole using Numicon.
* Add and subtract fractions with the same denominator within and up to one whole using a bar model and number line.
* Add and subtract fractions where one denominator is a multiple of the other using Numicon.
* Add and subtract fractions where one denominator is a multiple of the other using a bar model and number line.
* Generate 4 addition and subtraction statements using a bar model.
* Generate 4 addition and subtraction statements using a bar model where the whole or a part is unknown.
* Sort missing number questions based on whether the whole or a part is unknown, then solve.
* Solve balancing equations where both sides are whole unknown.
* Solve balancing equations where both sides are part unknown.
* Solve balancing equations where one side is part unknown and one side is whole unknown.
* Calculate a unit fraction of a number by dividing into groups of the denominator – counters on a bar model.
* Calculate a unit fraction of a number by dividing into groups of the denominator – jottings on a bar model.
* Calculate the whole when given the unit fraction.
* Calculate a non unit fraction of a number by dividing into groups of the denominator and multiplying by the numerator – counters on a bar model.
* Calculate a non unit fraction of a number by dividing into groups of the denominator and multiplying by the numerator – jottings on a bar model.
* Calculate the whole when given the non unit fraction.
* Solve balancing equations where both sides are unit fractions (whole and part unknown).
* Solve balancing equations where one side is a unit fraction and one side is a non unit fraction (whole and part unknown).

Solve balancing equations where both sides are non unit fractions (whole and part unknown). | **Acute angles*** Represent acute angles as smaller than right angles.
* Identify acute angles in different orientations, sizes and shapes.
* Estimate the size of acute angles where the 45 degree benchmark is labelled.
* Estimate the size of acute angles with no benchmarks.
* Compare two acute angles to say which is bigger / smaller.
* Order multiple acute angles from smallest to biggest / biggest to smallest.
 | **Converting between hours and days and weeks*** Count forwards and backwards in 12s.
* Count forwards and backwards in 24s.
* Convert multiples of one day to hours.
* Convert multiples of half a day to hours.
* Convert multiples of 24 hours to days.
* Convert multiples of 12 hours to days.
* Convert multiples of 1 hour to days.
* Count forwards and backwards in 7s.
* Convert multiples of one week to days.
* Convert multiples of 7 days to weeks.
* Convert multiples of 1 day to weeks.
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Summer 2

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| **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** |
| **Time differences*** Add a duration to a start time to find the end time with no crossing of boundaries.
* Add a duration to a start time to find the end time with crossing of boundaries.
* Subtract a duration from an end time to find the start time with no crossing of boundaries.
* Subtract a duration from an end time to find the start time with crossing of boundaries.
* Count from the start time to the end time to find the duration with no crossing of boundaries.
* Count from the start time to the end time to find the duration with crossing of boundaries.
* Say how much longer / shorter two durations are when given the start and end times.
* Use timetables to solve a variety of problems where the start time, end time or duration are unknown.
 | **Obtuse angles*** Represent obtuse angles as greater than right angles but smaller than straight lines.
* Identify obtuse angles in different orientations, sizes and shapes.
* Estimate the size of obtuse angles where the 135 degree benchmark is labelled.
* Estimate the size of obtuse angles with no benchmarks.
* Compare two obtuse angles to say which is bigger / smaller.
* Order multiple obtuse angles from smallest to biggest / biggest to smallest.
* Order multiple obtuse and acute angles from smallest to biggest / biggest to smallest.
 | **Statistics – line graphs*** Use a plotted point on a line graph to read from the y to the x axis.
* Use a plotted point on a line graph to read from the x to the y axis.
* Plot points on a line graph.
* Use a value on the y axis to read a value on the x axis.
* Use a value on the x axis to read a value on the y axis.
* Describe the story of a line graph.
* Calculate lengths of time from points on a line graph.
 | **Triangles*** Classify examples and non examples of triangles based on the number of sides.
* Annotate equilateral triangles to show equal sides and equal angles in different sizes / orientations.
* Find 3 lines of symmetry in equilateral triangles in different orientations / sizes.
* Classify examples and non examples of equilateral triangles.
* Annotate isosceles triangles to show 2 equal sides and 2 equal angles in different sizes / orientations.
* Find one line of symmetry in isosceles triangles in different orientations / sizes.
* Classify examples and non examples of isosceles triangles.
* Annotate scalene triangles to show 3 different length sides and 3 different angles in different sizes / orientations.
* Classify examples and non examples of scalene triangles.
 | **Quadrilaterals*** Classify examples and non examples of quadrilaterals based on the number of sides.
* Annotate squares to show equal sides and equal angles in different sizes / orientations.
* Find 4 lines of symmetry in squares in different orientations / sizes.
* Classify examples and non examples of squares in different orientations and sizes.
* Annotate rectangles to show two pairs of equal sides and 4 equal angles in different sizes / orientations.
* Find 2 lines of symmetry in rectangles in different orientations / sizes.
* Classify examples and non examples of rectangles in different orientations and sizes.
* Annotate rhombuses to show equal sides and 2 pairs of equal angles in different sizes / orientations.
* Find 2 lines of symmetry in rhombuses in different orientations / sizes.
* Classify examples and non examples of rhombuses in different orientations and sizes.
* Annotate trapeziums to show (possibly) 2 equal sides and 2 equal angles.
* Annotate isosceles trapeziums to show 2 equal sides and 2 pairs of equal angles in different sizes / orientations.
* Find one line of symmetry in isosceles trapeziums in different orientations / sizes.
* Classify examples and non examples of trapeziums in different orientations and sizes.
* Annotate kites to show 2 pairs of equal sides and 2 pairs of equal angles in different sizes / orientations.
* Find 2 lines of symmetry in kites in different orientations / sizes.
* Classify examples and non examples of kites in different orientations and sizes.
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