

Year 5 Maths – Parent Guide

In Year 5, children deepen their understanding of **large numbers, fractions, decimals, percentages, and written methods** for calculation. They're expected to be more independent, to explain their thinking clearly, and to apply maths confidently in real-life problems.

We focus on three big aims:

- **Fluency** – knowing key facts and using efficient methods with confidence
- **Reasoning** – explaining *why*, spotting patterns and making general rules
- **Problem solving** – tackling multi-step problems and persevering when it's hard

We still encourage them to:

“See it, think it, link it”

and ask:

“What's the same? What's different? What do you notice?”

Rapid Recall & Mental Maths in Year 5

Key facts children are working towards knowing quickly

- **All times tables up to 12×12**
- **All related division facts**
 - e.g. $9 \times 7 = 63$, so $63 \div 7 = 9$
- **Sums and differences of decimals** (e.g. 6.5 ± 2.7)
- **Doubles and halves of decimals** (e.g. half of 5.6)
- **Quick percentages of amounts:**
 - **50%, 25%, 10%** of small numbers or amounts of money

They also practise mental strategies to:

- Count up to the next multiple of **10, 100, 1000**
- Use **place value** (hundreds, tens, ones, tenths, hundredths) to add and subtract
- Adjust by adding/subtracting a **near multiple of 10 or 100**, then correcting
- Use **near doubles**
- Use known facts to **multiply and divide**
- Use **factors** to make multiplication easier (e.g. 24×15 as $6 \times 4 \times 15$)
- **Connect:**
 - addition \leftrightarrow subtraction
 - multiplication \leftrightarrow division

At home:

- Short, regular, no-pressure practice of times tables and related division facts.

- Quick questions with decimals and percentages in real contexts (shopping, measures).
 - Ask: “Which is the quickest way to do that in your head?”
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AUTUMN TERM – Year 5

1. Place Value (Up to 1,000,000 & Negative Numbers)

Children learn to:

- Read, write, order and compare numbers up to **1,000,000**
- Understand the value of each digit in large numbers
- Count forwards and backwards in powers of 10 (10s, 100s, 1000s, 10,000s)
- Use **negative numbers** in context (e.g. temperature, lifts)
- Round numbers to the nearest 10, 100, 1000, 10,000 and 100,000
- Solve real-life problems using large and negative numbers

At home:

- Look at big numbers on bills, sports scores, population figures, etc.
 - Talk about temperatures, including below zero.
 - Ask: “Round 378,492 to the nearest 1000 / 10,000.”
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2. Addition & Subtraction (Large Numbers & Decimals)

Children work on:

- Adding and subtracting **whole numbers with more than 4 digits** using column methods
- Adding and subtracting **mentally** with increasingly large numbers
- Using **rounding** to estimate and check answers
- Solving **multi-step problems** (more than one calculation) in real-life contexts
- Using addition and subtraction facts with **decimals to 1 decimal place** (often in money)

At home:

- Use shopping and budgeting: “If we spend £23.75 and then £19.40, what’s the total? About how much do you think first?”
 - Let your child choose whether to do it mentally, using a jotting or using a written method – then ask them to explain why.
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3. Fractions (Comparing, Ordering & Mixed Numbers)

Children learn to:

- Compare and order fractions where denominators are **multiples of the same number**
 - e.g. $\frac{2}{5}$ and $\frac{6}{10}$
- Recognise **mixed numbers** (e.g. $1\frac{1}{2}$) and **improper fractions** (e.g. $\frac{7}{4}$)
- Convert between the two (e.g. $\frac{7}{4} \leftrightarrow 1\frac{3}{4}$)
- Write and interpret statements where fractions are greater than 1
- Solve fraction problems in context

At home:

- Use real-life sharing (pizza, cake, bars of chocolate) to show improper and mixed fractions.
 - Ask: “Is $\frac{5}{6}$ bigger or smaller than $\frac{3}{4}$? How do you know?”
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4. Multiplication & Division (Including Factors & Primes)

Children:

- Find **multiples and factors** of numbers
- Find **factor pairs** and **common factors** of two numbers
- Understand and use **prime numbers**, **prime factors** and **composite numbers**
- Identify primes up to 100 and recall primes up to 19
- Use formal written methods to:
 - Multiply up to **4-digit numbers** by a **1- or 2-digit number** (including long multiplication)
- Multiply and divide whole numbers and decimals by **10, 100 and 1000**
- Recognise and use **square numbers** (e.g. $6^2 = 36$) and **cube numbers** (e.g. $3^3 = 27$)

At home:

- Talk about “square numbers” (4, 9, 16, 25, ...) and spot them in real contexts (areas, grids, games).
 - Ask: “Is 17 a prime? Why/why not?”
 - Use real-life multiplication situations: recipes, scaling up a batch of cakes, etc.
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SPRING TERM – Year 5

1. Multiplication & Division (Short Division & Problem Solving)

Children:

- Divide up to **4-digit numbers** by a 1-digit number using **short division** (the “bus stop” method)

- Interpret remainders sensibly (left over, rounded up, as decimals or fractions depending on the context)
- Solve problems involving all four operations ($\times \div + -$), including multi-step and “equals sign” problems (e.g. $35 + \square = 4 \times 10$)
- Use factors, multiples, squares and cubes to work efficiently
- Solve problems involving **scaling** and **rates** (e.g. “3 km in 20 minutes – how far in 1 hour?”)

At home:

- Use recipes and “serves 4” → “serves 6/8” type scaling questions.
 - Talk about speeds (distance/time), or prices per item when buying multi-packs.
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2. Addition & Subtraction with Decimals

Children:

- Use addition and subtraction facts for **1** with decimals to two decimal places (e.g. $0.73 + 0.27 = 1$)
- Choose mental strategies for working with decimals (especially money and measures)

At home:

- Use money problems: “You have £10. You’ve spent £7.35. How much is left?”
 - Let them choose whether to use mental, written, or a mix.
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3. Fractions (Equivalence, Operations & Problem Solving)

Children:

- Compare and order fractions with related denominators
- Identify and write **equivalent fractions** (including tenths and hundredths)
- Convert between improper fractions and mixed numbers
- Add and subtract fractions with the same denominator and with denominators that are **multiples of the same number**
- Solve real-life fraction problems

At home:

- Draw or fold shapes to show equivalent fractions (e.g. $3/6$, $1/2$).
 - Ask: “If we share 7 pizzas between 4 people, what fraction does each get?”
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4. Statistics (Graphs & Averages)

Children:

- Read and interpret **line graphs, bar charts, tables and timetables**
- Solve comparison problems (“How many more?”, “How many fewer?”)
- Decide which type of graph is most appropriate for different data
- Use Venn and Carroll diagrams to sort and classify numbers and shapes
- Begin to calculate and interpret **mode, mean and median**

At home:

- Look at weather graphs, sports stats, or any charts in news/media and ask your child to explain what they show.
 - Collect data (e.g. daily step counts, reading minutes) and draw a line graph, then talk about averages.
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5. Geometry (Shape, Position & Movement)

Children learn to:

- Identify 3D shapes from 2D drawings and nets
- Describe reflections and translations on a coordinate grid (first quadrant)
- Plot points and complete shapes
- Use rectangle properties to find missing lengths or angles
- Distinguish between **regular** and **irregular** polygons (equal and unequal sides/angles)

At home:

- Spot shapes in buildings, logos, packaging, and ask: “Is it regular or irregular?”
 - Use squared paper to draw a shape and ask your child to reflect or translate it.
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SUMMER TERM – Year 5

1. Geometry – Angles

Children:

- Know that angles are measured in **degrees (°)**
- Estimate and measure **acute, right, obtuse** and **reflex** angles with a protractor
- Understand:
 - Angles at a point total **360°**
 - Angles on a straight line total **180°**
 - Other multiples of **90°**

At home:

- Use a protractor (if you have one) to measure angles on drawings, boxes, book corners.
 - Ask: “If one angle is 120° , what’s the rest to make a full turn?”
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2. Place Value with Decimals (to Three Decimal Places)

Children learn to:

- Count forwards and backwards in decimal steps
- Understand and work with digits to **three decimal places**
- Place decimals on a **number line**
- Find 0.01, 0.1, 1, 10, 100, 1000 more or less than a given number
- Describe and extend number sequences that include decimals and multiplication/division patterns

At home:

- Use scales, thermometers or measuring jugs that show decimal numbers.
 - Ask: “What’s 0.1 more than 2.35?” “What’s 10 less than 17.408?”
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3. Fractions, Decimals & Percentages (Links & Problems)

Children:

- Multiply **proper fractions and mixed numbers** by whole numbers using diagrams and models
- Write decimals as fractions (e.g. $0.71 = 71/100$)
- Recognise **thousandths** and relate them to tenths and hundredths
- Round decimals to the nearest whole number and to 1 decimal place
- Read, write, order and compare decimals up to **three decimal places**
- Understand and use **percentages** as “out of 100” and link them to fractions and decimals
- Know key equivalences (e.g. $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and denominators that are multiples of 10 or 25)
- Solve real-life problems that involve fractions, decimals and percentages

At home:

- Talk about sale discounts, interest rates, or test scores as percentages.
 - Ask: “What’s 25% of £8?” “What’s 10% of 250 ml?”
 - Use bar models or shaded grids to show fraction–decimal–percentage links.
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4. Measures (Length, Mass, Capacity, Time & Scaling)

Children:

- Convert between metric units (km ↔ m, m ↔ cm, cm ↔ mm, g ↔ kg, l ↔ ml)
- Use approximate links to imperial units (inches, pounds, pints)
- Convert between units of time (hours, minutes, seconds; years and months; weeks and days)
- Use all four operations in measure problems (length, mass, volume, money) using decimal notation
- Measure and calculate **perimeter** of composite rectilinear shapes
- Calculate and compare **area** of rectangles in cm² and m², and estimate area of irregular shapes
- Estimate and calculate **volume and capacity** using cubes and practical activities

At home:

- Use cooking, DIY, and travel to talk about measures and conversions.
 - Let your child help with measuring ingredients, converting units, or working out total distances.
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5. Problem Solving Across All Areas

Throughout the summer term (and all year), children:

- Solve multi-step problems using all four operations and combinations of them
- Choose appropriate strategies (mental, written, jottings)
- Estimate first, calculate, then check using inverse operations
- Explain and justify their reasoning in writing and discussion

At home:

- Give realistic challenges: planning a birthday budget, scaling recipes, working out travel times, comparing offers in shops.
 - Always ask: “How do you know?” “Could there be another way?”
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How Parents Can Support in Year 5 – Quick Recap

- Keep **practising times tables** – especially the trickier ones (7, 8, 9, 11, 12).
- Use **real-life maths** at every opportunity: money, cooking, timing, measuring, comparing deals.
- Encourage children to **explain their methods and check their answers**, not just ‘get it done’.
- Praise **reasoning, effort and perseverance**, especially with longer, multi-step problems.

