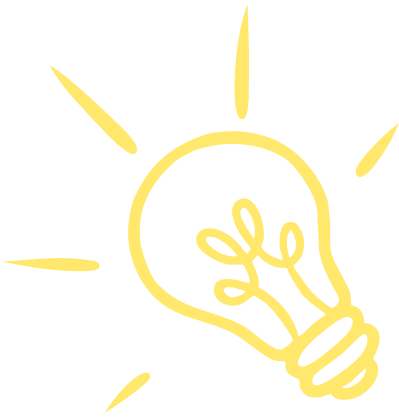


Year 4 Multiplication and Division: A Step-by-Step Guide for Parents

This step-by-step explanation of year 4 multiplication and division can help you support your child's learning at home. The subject is broken down into manageable chunks, providing you with a simple guide to follow when supporting your child at home. Whether your child is at the early stages of learning their times tables or whether they are already multiplying different combinations of numbers in their head, you will find a suitable step for your child in this guide.

Within **this area of the website**, you will find a selection of resources intended to help your child learn about each step of this guide. Each step also contains a keyword or phrase that you can use to search the Twinkl site for more resources and activities, designed to support your child in achieving that stage. Simply type the keyword or phrase into the search bar and press enter to explore together.

Click here



We hope you find the information on our website and resources useful. The contents of this resource are for general, informational purposes only. This guide is intended to offer parents general guidance on what subject areas tend to be covered in their child's year group and where they could support their children at home. However, please be aware that every child is different and information can quickly become out of date. There are some subject areas that we have intentionally not covered due to the nature of how they are taught or because a trained professional needs to teach these areas. We try to ensure that the information in our resources is correct but every school teaches the national curriculum in its own way. If you would like further guidance or are unsure in any way, we recommend that you speak to your child's teacher or another suitably qualified professional.

Multiplication and Division

What Do Children Learn in Multiplication in Year 4?

In year 4, children often complete their learning of the times tables. It is an expectation of the national curriculum in England that children will be proficient in times tables to 12×12 by the end of year 4 when the online multiplication tables check will be taken. Although some primary schools stopped teaching tables beyond the 10th **multiple** ($10 \times$) in the 1990s, learning tables to the 12th multiple is important as learning to tell the time involves the doubling of numbers up to 12 for the 24-hour clock.

What Do Children Learn in Division in Year 4?

In year 4, children begin to learn the formal written methods for both multiplication and division. For older parents and grandparents, these methods were often the core ways in which division was taught up to the 1970s. Children usually work through multiplying numbers in columns, set out with the larger number above the smaller number in readiness for long multiplication. In division, they are often introduced to the **bus stop** format for division, where the number being divided is written underneath a 'bus stop' and the number that is being divided into it is written to the left.

What Are Factor Pairs?

Factor pairs are two numbers that can be multiplied together to give the same answer. For example, the factor pairs of 24 are 1 and 24, 2 and 12, 3 and 8, 4 and 6. These factor pairs can be multiplied in any order to give the answer 24: $2 \times 12 = 24$ and $12 \times 2 = 24$.

What Is the Distributive Law?

The distributive law allows children to use a different method to carry out multiplication or to check their multiplication answers. It is a term used to describe how children can **partition** numbers when multiplying. For example, to answer 12×3 , we could use several methods. We might know the answer from our times tables as 36. We might add $12 + 12 + 12$. We can set this out as a formal multiplication in columns. Using the distributive law, we can also partition 12 into 10 and 2, multiply each by 3 and then add the answers together: $10 \times 3 = 30$ and $2 \times 3 = 6$ so the total answer is 36. The wider the variety of methods a child can learn at this stage, the more methods they have access to in order to check their calculations. As children move on to upper key stage 2 and then secondary school, they can use distributive methods when working with brackets and solving equations.

Multiplying with Building Bricks

If your child is struggling with the idea of multiplication, try using bricks with small spot stickers on them. If you put two spots on each brick, they can practise the 2 times table: one block has two spots, two blocks have four spots, etc. Then, try using bricks with four spots to practise the 4 times table and so on. If your child needs more support, print this colourful **activity sheet**.

Times Tables Posters

Why not display these **colourful posters** in your child's room to help remind them of the patterns of the answers? Build up the number of posters as your child tackles more times tables.

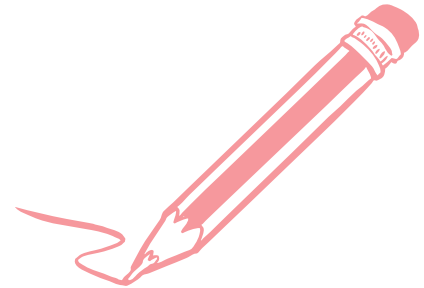
Roll a Dice Game

This **simple, fun game** requires just two dice and a printed copy of the game. Players multiply the number thrown by 2 or 3 and colour in the correct answer on the sheet. The first player to get three squares of their colour in a row wins.

Step 1

Year 4 Multiplication Triangles

By the time your child is in year 4, it is likely that they are already used to many times tables. At this stage, most children have mastered the 2, 3, 4, 5, 8 and 10 times tables. If this is not the case, look back to our handy Multiplication and Division Step-by-Step Guides for earlier years. During year 4, most schools add in the 6, 7, 9, 11 and 12 times tables. These multiplication triangles can help children to practise these newly introduced tables.



Random Tables Games

Once your child is familiar with the multiplication and division facts for all the times tables, it is important to practise them randomly so that their recall speed improves with time. These handy, colour-coded cards can be used to play snap or to generate speedy answers to tables at random. If your child still struggles with some tables, you can remove those cards and then practise them separately, adding them to the set once they are learned. Find a range of other great games by using the search term 'times table games' on the Twinkl website.

Step 2

Step 3

Formal Multiplication

This presentation guides you and your child through the process of writing and solving multiplication calculations. It shows how to set out the calculation and where and how to write the answers. Children often find this easiest to do on **squared paper** so that digits are kept in neat columns. Children start by multiplying two-digit numbers by a single digit number and then move on to three-digit numbers. If your child needs to practise further, try our **Year 4 Multiplication Workbook**, which comes with squares for setting out calculations. An answer sheet is also provided.



Step 4

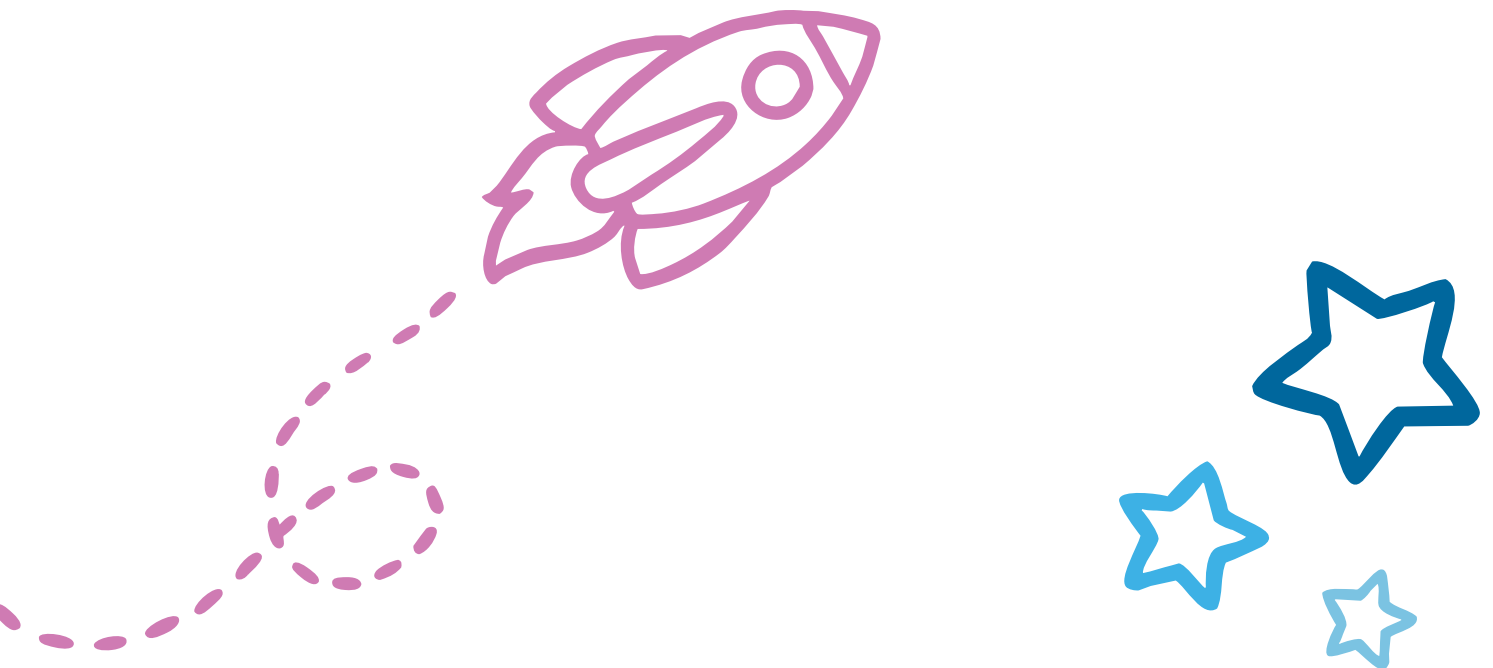
Factor Pairs

Factor pairs are pairs of numbers that can be multiplied to produce the same answer. The factor pairs for 12 are 1 and 12, 2 and 6, 3 and 4. The presentation in this pack also explains **commutativity**, which means that you can swap the order of a multiplication calculation and the answer will still be the same. If your child needs further support with factor pairs or a practice game, try the engaging and helpful bingo game within the **Factor Pairs Bingo Pack**.

Distributive Law

As children continue to learn more about multiplication and division in primary school, they are taught different ways of solving similar problems. For example, 24×3 can be calculated by the formal method used in step 3. However, children can also partition 24 into 20 and 4. $20 \times 3 = 60$ and $4 \times 3 = 12$ so the total is 72. They can use this method to double-check their answers to the formal method. These problem-solving worksheets help children to practise using the distributive law when multiplying two-digit numbers by one-digit numbers.

Step 5



Explore and Discover More

Twinkl Go! is a digital platform, hosting interactive content such as videos, games, audiobooks and more. Twinkl Go! enables digital content to be streamed to your computer or mobile device.



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Go!



twinkl
Book Club

Twinkl Book Club is our book subscription service. Enjoy our original works of fiction in beautiful printed form, delivered to you each half-term and yours to keep!



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Boost

Twinkl Boost is a range of intervention resources, created to support and lift learning with children at every level. These include our easy-to-use SATs and Phonics Screening resources.



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imagine

Imagine resources are designed to help your children to think creatively, question and imagine. Every week, a new topic consisting of five photos, each with related activities, is created.



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ORIGINALS

Twinkl Originals are engaging stories written to inspire children from EYFS to KS2. Designed to encourage a love of reading and help curriculum-wide learning through accompanying resources.



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KIDS' TV

Twinkl Kids' TV is our wonderful YouTube channel dedicated to fun and informative video-style resources full of new and creative activities you can try at home!