

# Year 6 Problem-Solving and Games: A Step-by-Step Guide for Parents

This step-by-step explanation of problem-solving and games in maths 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. Whether your child is a keen learner, who wants to revise and improve their maths skills in the run-up to national tests, or they are a reluctant learner, who needs to develop maths confidence, you will find activities to suit them 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.

dividing proper fractions



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 However, please be aware that every child is different and information can quickly become out of date.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.

# Year 6 Problem-Solving and Games

## How Do Maths Games Help with the SATs Arithmetic Paper?

The year 6 SATs arithmetic paper, taken by most pupils in year 6 in England, lasts for 30 minutes and tests children's number and calculation skills. Some of the questions test children's knowledge of number facts, such as times tables, and others test children's use of calculation methods. Playing games with your child, both orally and using resources such as board games, dominoes and dice, will help them to respond to questions in a random order and within a time limit. This helps to develop mathematical fluency and accuracy which are both key features of success in the year 6 arithmetic test.

## What Do the SATs Mathematical Reasoning Papers Consist Of?

The year 6 SATs mathematical reasoning papers test children's ability to be able to use and apply the maths they have learnt. This includes problem-solving: children often need to work out a way of solving a problem or to explain their method. The reasoning papers cover a wide range of maths, including shape and statistics. Skills such as rounding and estimating are also important in mathematical reasoning as they help children to check whether their answers seem sensible and are likely to be correct.

## What Problems Are Set in the SATs Mathematical Reasoning Papers?

Word problems are a key feature of the mathematics reasoning papers. Several word problems in the papers are multi-step problems. Your child will need to understand the information given in the question, decide how many steps are needed to solve the problem and choose whether each step needs addition, subtraction, multiplication or division. Questions can involve information about time, money or measurement (such as mass or distance) so children will need to be confident with a range of units of measurement (for example, kilograms and grams).

### Ratio Bake

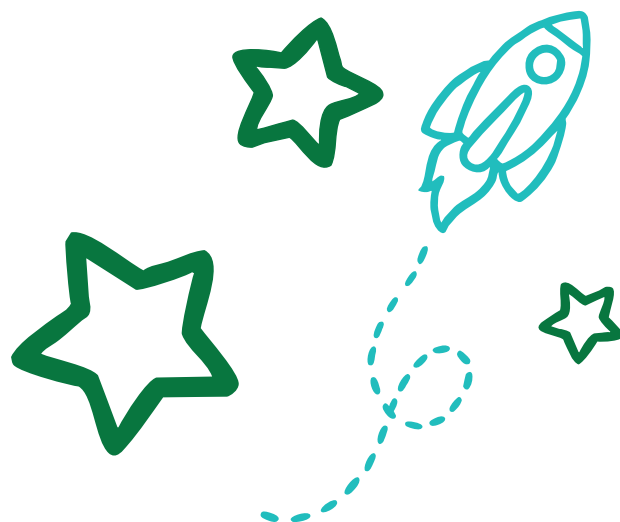
Making recipes for different numbers of people depends on ratio and proportion and practises the skills of multiplication and division. Have a maths moment followed by a wellbeing moment by adjusting these **Twinkl Ratio Recipes** and then baking the cupcakes or gingerbread shapes. A tasty way to learn more about ratio and proportion!

### How Much Is the Shopping?

Get your child to round the price of purchases on your supermarket or online shop to the nearest pound and add up as you go along. At the end of the shop, show your child how close their total is to the actual total. This activity shows the importance of rounding for checking that answers to calculations make sense.

### Twinkl Go!

One of the steps in this guide uses a Twinkl Go computer game. Why not take a look at the amazing range of maths games by following this **Twinkl Go! link**? You'll find a huge range of games that your child won't want to put down! You can often set the difficulty level and/or range of times tables or numbers used at the beginning, giving your child confidence and allowing you to monitor their progress.



## Step 1

### Maths Mastery Challenge Cards

In year 6, children need to explore a wide range of word problems and to practise these in different topic areas. Our **Maths Mastery Challenge Cards** are great for doing this. This step of the guide presents your child with a range of place value problems. You can show these on a tablet or laptop screen. Get your child to try two or three in a session and to show their working out as they calculate. On the year 6 SATs reasoning papers, word problems can be set in any area of maths. If you type in the search term above on the Twinkl site, you will find mastery challenge cards on a range of maths themes, targeted at year 6 pupils and covering a variety of topics.

## Step 2

### Space Game

Fractions can appear on all three maths tests in year 6 so are an important area. Games are a great, entertaining way of motivating children to develop mathematical fluency and practise mathematical methods while having fun. This game focuses on dividing proper fractions (fractions which are worth less than 1) by whole numbers and simplifying the answers. Once your child has completed the reasoning assessment at step 4, you can use the search term **UKS2 maths game** to find a range of games to match any areas where your child may need extra practice.

## Step 3

### The Mystery of the Royal Wedding Speech

This game builds on the activity in step 2 to revise a wide range of fractions skills. These include simplifying fractions, comparing fractions, adding and subtracting fractions with different denominators (the bottom number in a fraction), multiplying pairs of proper fractions and dividing a proper fraction by a whole number. Type the phrase **SATs survival maths** into the search bar to access a huge range of our fantastic SATs survival resources. If your child has tried the step 4 assessment, this will help you to decide which resource(s) to pick.

### Maths Reasoning Assessment

As the summer term approaches in year 6, it is useful to check how well your child is able to use mathematical reasoning. Once your child has completed this assessment, you can mark it alongside them, spotting any gaps in their understanding. You can then recap any areas where they need support by returning to the steps above or by going to the **Maths Parents Area** of Twinkl and selecting the appropriate topic. In each section, you will find resources and a step-by-step guide to help you support your child. You could also try our **SATs Survival Maths Reasoning Workbook**.

## Step 4

# 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.

The Twinkl Go! logo, featuring the word 'twinkl' in a blue cloud shape and 'Go!' in white text below it, all within a blue circle with a pink border. To the right of the circle are two lightbulb icons, one larger and one smaller, both with rays emanating from them.

twinkl  
Go!

The Twinkl Book Club logo, featuring the word 'twinkl' in a blue cloud shape and 'Book Club' in a colorful, blocky font below it, all within a blue circle with a pink border. To the left of the circle are three orange stars of varying sizes.

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!

The Twinkl Boost logo, featuring the word 'twinkl' in a blue cloud shape and 'Boost' in white text below it, all within a blue circle with an orange border. To the right of the circle is a green rocket ship icon.

twinkl  
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.

The Twinkl Imagine logo, featuring the word 'twinkl' in a blue cloud shape and 'imagine' in a white, lowercase font below it, all within a blue circle with a green border. To the left of the circle are two purple heart icons.

twinkl  
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.

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.

The Twinkl Originals logo, featuring the word 'twinkl' in a blue cloud shape and 'ORIGINALS' in a white, uppercase font below it, all within a blue circle with an orange border.

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ORIGINALS

The Twinkl Kids' TV logo, featuring the word 'twinkl' in a blue cloud shape and 'KIDS' TV' in a colorful, blocky font below it, all within a blue circle with a green border.

twinkl  
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!