

mental maths tricks for kids

mental maths tricks for kids are essential tools that help young learners develop quick calculation skills and boost their confidence in handling numbers. These techniques simplify complex arithmetic operations, making math fun and accessible. Incorporating mental math strategies into learning routines enhances cognitive abilities such as memory, concentration, and logical thinking. This article explores a variety of effective mental math tricks tailored specifically for children, including addition, subtraction, multiplication, and division shortcuts. Additionally, it covers tips for teaching these methods to kids, ensuring they grasp concepts easily and apply them in everyday situations. Understanding these tricks can transform the way children approach math problems and improve their overall academic performance. The following sections provide a comprehensive guide to mastering mental math through engaging and practical techniques.

- Basic Addition and Subtraction Tricks
- Multiplication Shortcuts for Kids
- Division Strategies Made Easy
- Number Sense and Estimation Techniques
- Tips for Teaching Mental Math Effectively

Basic Addition and Subtraction Tricks

Mastering addition and subtraction is fundamental for children learning mental math. Employing specific tricks helps kids perform these operations faster and with greater accuracy. These methods reduce reliance on written calculations and encourage mental agility.

Using Number Bonds

Number bonds represent pairs of numbers that add up to a specific total, usually ten or multiples of ten. For example, knowing that 7 and 3 make 10 can simplify addition tasks. Teaching kids to recognize common number bonds enables them to break numbers down efficiently during calculation.

Counting On and Counting Back

Counting on involves starting from the larger number and adding the smaller number mentally. Conversely, counting back means subtracting by moving backward from the larger number. These techniques help children avoid recounting from zero, speeding up basic arithmetic.

Making Tens

This trick involves adjusting numbers to reach the nearest ten, then completing the calculation. For instance, to add $8 + 6$, children can think of $8 + 2$ to make 10 and then add the remaining 4. This method simplifies addition by leveraging easy-to-handle base numbers.

List of Basic Addition and Subtraction Tricks

- Memorize number bonds to 10 and 20.
- Use counting on and counting back for small differences.
- Break numbers into tens and units for easier computation.
- Apply the making tens method to simplify addition.
- Practice doubles (e.g., $4 + 4$) and near doubles (e.g., $4 + 5$).

Multiplication Shortcuts for Kids

Multiplication can be challenging for children, but mental math tricks simplify the process and increase speed. These shortcuts focus on patterns and properties of multiplication that are easy to remember and apply.

Multiplying by 5

Multiplying any number by 5 can be done quickly by halving the number and then multiplying by 10. For example, 5×8 can be calculated as $(8 \div 2) \times 10 = 4 \times 10 = 40$. This trick leverages easier operations to simplify multiplication.

Doubling and Halving

This method breaks down multiplication into simpler steps. If one factor is even, halve it and double the other, making calculations more manageable. For example, 4×25 can be converted to 2×50 or 1×100 , which are easier to compute mentally.

Using the Distributive Property

Breaking one number into parts and multiplying each separately before adding results is an effective mental math strategy. For instance, 6×14 can be split into $(6 \times 10) + (6 \times 4) = 60 + 24 = 84$.

Multiplying by 9

The trick for multiplying by 9 involves using fingers or subtraction. One simple method is to multiply the number by 10 and subtract the original number. For example, $9 \times 7 = (10 \times 7) - 7 = 70 - 7 = 63$.

Common Multiplication Shortcuts

- Multiply by 5 using halving and multiplying by 10.
- Double one number and halve the other for easier calculations.
- Apply distributive property to split complex numbers.
- Multiply by 9 by multiplying by 10 then subtracting the number.
- Memorize multiplication tables up to 12 for quick recall.

Division Strategies Made Easy

Division often poses difficulties for kids, but mental math strategies can make it more approachable. These tricks focus on simplifying division problems and strengthening number sense.

Using Multiplication Facts

Understanding multiplication tables helps children solve division problems by identifying how many times the divisor fits into the dividend. For example, knowing $4 \times 6 = 24$ simplifies calculating $24 \div 4 = 6$.

Breaking Down the Dividend

Dividing a large number by splitting it into smaller, more manageable parts makes mental division easier. For instance, to divide 96 by 8, children can think of $80 \div 8 = 10$ and $16 \div 8 = 2$, then add the results to get 12.

Estimating Quotients

Estimation helps children approximate division results before calculating precisely. By rounding numbers to the nearest ten, kids gain a sense of the expected answer, which aids in confirming the accuracy of their division.

Division by 5 Shortcut

Dividing by 5 can be done by multiplying the number by 2 and then dividing by 10. For example, $65 \div 5$ becomes $(65 \times 2) \div 10 = 130 \div 10 = 13$.

Key Division Strategies

- Use multiplication facts to reverse-engineer division.
- Break down large dividends into smaller parts.
- Estimate quotients by rounding numbers.
- Divide by 5 using multiplication by 2 and dividing by 10.
- Practice mental division through daily exercises.

Number Sense and Estimation Techniques

Developing strong number sense is vital for mental math success. Estimation techniques allow children to make quick judgments about the reasonableness of answers and simplify calculations effectively.

Rounding Numbers

Rounding involves adjusting numbers to the nearest ten, hundred, or other place value to simplify mental calculations. This technique is particularly useful for addition, subtraction, multiplication, and division in everyday contexts.

Compatible Numbers

Compatible numbers are pairs that are easy to compute mentally. Using numbers that work well together helps children perform approximate calculations rapidly. For example, 49 is close to 50, which is easier to multiply or divide mentally.

Front-End Estimation

This strategy focuses on the leading digits of numbers to estimate sums or differences. For example, when adding $432 + 298$, children can add $400 + 200 = 600$ as a rough estimate before refining the answer.

Using Benchmarks

Benchmarks such as 25, 50, 75, and 100 serve as reference points, aiding kids in assessing the size and relationship of numbers. These benchmarks make mental calculations more intuitive and less error-prone.

Number Sense and Estimation Tips

- Practice rounding numbers to simplify calculations.
- Identify compatible numbers for easier mental math.
- Use front-end estimation for quick approximations.
- Apply benchmarks to judge the magnitude of numbers.
- Encourage estimation before exact calculations.

Tips for Teaching Mental Math Effectively

Teaching mental maths tricks for kids requires a structured approach that promotes understanding and retention. Effective strategies involve making learning engaging, consistent practice, and encouraging problem-solving.

Incorporate Games and Activities

Interactive games and puzzles motivate children to practice mental math without pressure. Activities like flashcards, math bingo, and timed challenges create a fun environment for skill development.

Use Visual Aids and Manipulatives

Visual tools such as number lines, counters, and blocks help children grasp abstract concepts by providing concrete representations. These aids support the transition from concrete to mental calculations.

Encourage Daily Practice

Regular practice is essential for mastering mental math. Short, frequent sessions help reinforce techniques and improve speed over time, making mental calculations second nature.

Teach Step-by-Step Methods

Breaking down tricks into clear, manageable steps ensures children understand the process and can replicate it independently. Gradual progression from simple to complex problems builds confidence.

Promote a Positive Attitude Toward Math

Encouraging a growth mindset helps children overcome anxiety and develop resilience. Recognizing effort and celebrating progress fosters a supportive learning atmosphere conducive to mental math mastery.

Summary of Teaching Tips

1. Integrate math games and interactive activities.
2. Utilize visual aids to explain concepts.
3. Establish a routine for daily mental math practice.
4. Provide clear, stepwise instructions for tricks.
5. Foster a positive and encouraging learning environment.

Frequently Asked Questions

What are mental maths tricks for kids?

Mental maths tricks for kids are simple techniques and strategies that help children perform arithmetic calculations quickly and efficiently in their minds without using paper or calculators.

Why is learning mental maths tricks important for kids?

Learning mental maths tricks improves kids' numerical skills, boosts their confidence, enhances memory, and helps them solve problems faster, which benefits their overall academic performance.

Can you give an easy mental maths trick for adding two-digit numbers?

One trick is to break the numbers into tens and units, add the tens first, then add the units, and finally combine the results. For example, $47 + 36 = (40 + 30) + (7 + 6) = 70 + 13 = 83$.

How can kids quickly multiply numbers by 5 using mental maths?

To multiply a number by 5, kids can multiply the number by 10 and then divide by 2. For example, $6 \times 5 = (6 \times 10) \div 2 = 60 \div 2 = 30$.

What is a simple mental maths trick for multiplying numbers by 9?

To multiply a number by 9, multiply it by 10 and then subtract the original number. For example, $7 \times 9 = (7 \times 10) - 7 = 70 - 7 = 63$.

How can kids quickly square numbers ending with 5?

For numbers ending with 5, multiply the first digit by the next higher number and then append 25. For example, 25^2 : $2 \times 3 = 6$, append 25 $\rightarrow 625$.

Are mental maths tricks helpful for improving concentration in kids?

Yes, practicing mental maths tricks requires focus and attention, which helps improve kids' concentration and cognitive skills over time.

What mental maths trick helps in subtracting numbers close to 100?

Subtract the number from 100 by subtracting the tens and units separately and combining the results. For example, $100 - 87 = 13$ (because $100 - 80 = 20$, then $20 - 7 = 13$).

Can mental maths tricks be used for division as well?

Yes, there are mental maths tricks for division, such as dividing by 5 by multiplying by 2 and then dividing by 10, or breaking down the dividend into smaller parts for easier calculation.

How can parents help kids learn mental maths tricks effectively?

Parents can encourage regular practice through fun games, use real-life examples, praise efforts, and teach one trick at a time to help kids learn mental maths tricks effectively.

Additional Resources

1. *"Mind Magic: Fun Mental Math Tricks for Kids"*

This book introduces children to exciting mental math shortcuts that make calculations faster and more enjoyable. Through colorful illustrations and engaging activities, kids learn to add, subtract, multiply, and divide without paper. It encourages developing number sense and boosting confidence

in everyday math challenges.

2. *"Brainy Numbers: Mental Math Made Easy"*

Designed for young learners, this book breaks down complex arithmetic into simple mental strategies. It features step-by-step explanations and practice problems that help children master quick calculations. The fun puzzles and games included keep kids motivated to practice regularly.

3. *"Quick Calculations: Mental Math Tricks for Kids"*

This guide offers a variety of mental math techniques tailored for children to accelerate their math skills. It covers topics like doubling, halving, and using number patterns to simplify calculations. With practical examples, kids can apply these tricks to schoolwork and daily life.

4. *"The Amazing Mental Math Challenge"*

Packed with challenges and brain teasers, this book turns mental math into an adventurous game. Children are encouraged to solve problems using clever tricks and shortcuts, enhancing their problem-solving abilities. It's perfect for kids who want to improve speed and accuracy in math.

5. *"Math Wizards: Mental Math Tricks for Young Minds"*

This book transforms math learning into a magical experience by presenting mental math techniques as wizardry skills. It teaches kids how to perform calculations quickly using fun mnemonics and patterns. The engaging narrative keeps children interested while building strong math foundations.

6. *"Super Speedy Math: Mental Tricks for Kids"*

Aimed at boosting calculation speed, this book introduces simple yet effective mental math strategies. It includes exercises that help kids practice multiplying, dividing, and working with fractions mentally. The clear instructions make it accessible for children of various skill levels.

7. *"Number Ninjas: Mastering Mental Math"*

This action-packed book uses the theme of ninjas to teach kids how to stealthily solve math problems in their heads. It covers addition, subtraction, multiplication, and division tricks that enhance mental agility. The interactive format encourages repeated practice through fun challenges.

8. *"Mental Math for Kids: Tricks and Tips"*

A comprehensive guide that equips children with a wide range of mental math techniques, this book builds confidence and improves numerical fluency. It offers practical tips for quick calculations and understanding number relationships. Suitable for elementary students eager to sharpen their math skills.

9. *"Fast and Fun Mental Math"*

This book combines speed and enjoyment by presenting mental math as a series of enjoyable exercises and games. It helps children develop strategies for rapid calculation in addition, subtraction, multiplication, and division. The lively format makes practicing math a delightful experience.

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