

## Welcome, Super Number Hero!

In this challenge, you'll put your subtraction skills to the test with large whole numbers. Get ready for creative, engaging activities that will sharpen your problem-solving abilities and help you tackle big calculations with ease.



### Task 1: Number Maze

**Instructions:** Find your way through the number maze by solving the subtraction problems. Each correct answer will guide you to the next number. Start at 9,876,543 and work your way down.

1. Start at 9,876,543
2. Subtract 1,234,567 → \_\_\_\_\_
3. Subtract 2,345,678 → \_\_\_\_\_
4. Subtract 987,654 → \_\_\_\_\_
5. Subtract 3,210,987 → \_\_\_\_\_

**Final Answer:** \_\_\_\_\_



### Task 2: Crack the Code

**Instructions:** Each subtraction answer corresponds to a letter. Match the results to the code key to reveal a hidden word.

$$\begin{aligned} 7,654,321 - 3,210,987 &= \_\_\_\_\_\_ \\ 8,765,432 - 4,321,098 &= \_\_\_\_\_\_ \\ 9,876,543 - 6,543,210 &= \_\_\_\_\_\_ \\ 5,432,109 - 2,345,678 &= \_\_\_\_\_\_ \\ 6,543,210 - 1,234,567 &= \_\_\_\_\_\_ \end{aligned}$$

**What word does the code spell?**

Code Key:

- 3,086,431 → Letter H
- 4,444,334 → Letter A
- 5,308,643 → Letter S
- 3,333,333 → Letter T
- 4,443,334 → Letter M

**Secret Code Word:** \_\_\_\_\_

# MEGA INQUIRY CHALLENGE



## Subtraction Bonanza!

$$\begin{array}{r} \text{th h t o} \\ \text{????} \\ - \quad \text{???} \\ \hline 345 \\ \hline \end{array}$$

Using any number between 0-9, replace the question marks and find a solution to this problem. A four digit number subtract a three digit number equals 345.

Is this still possible if you were only allowed to use numbers between 0-4?

### MEGA CHALLENGE:

What if you can only use numbers once? You can use any number between 0-9 but you can only use each number once!

*Note: You do not need to use all the numbers between 0-9*

## Answers

### Task 1: Number Maze

1.  $9,876,543 - 1,234,567 = 8,641,976$

2.  $8,641,976 - 2,345,678 = 6,296,298$

3.  $6,296,298 - 987,654 = 5,308,644$

4.  $5,308,644 - 3,210,987 = 2,097,657$

### Task 2:

Secret word = MATHS

### Problem-Solving Challenge: Subtraction bonanza

part 1 - accept any valid answer such as 1000-655

Part 2 - Since 345 itself contains "5", it's impossible to reach it using only digits 0-4. Any valid subtraction must produce a difference where each digit is 0, 1, 2, 3, or 4, and 345 contains "5", which makes it impossible.

Part 3 - A valid solution is:

$$1325 - 980 = 345$$

Checking digits:

- $1325 \rightarrow$  ✓ Digits: 1, 3, 2, 5 (all unique)
- $980 \rightarrow$  ✓ Digits: 9, 8, 0 (all unique)