

Mathematical challenges for able pupils

Year 2 C Handling data and
measures



Ben's numbers

Ben has written a list of different whole numbers.

The digits of each number add up to 5.

None of the digits is zero.

Here is one of Ben's numbers.

23

$$(2+3 = 5)$$

Ben has written all the numbers he can think of.
How many different numbers are there in his list?

Write all the numbers in order.

Learning Objective:

- Solve a given problem by organising and interpreting data in a simple table.
- Write whole numbers in figures; know what each digit represents.
- Order whole numbers.

Ben's Numbers - A little harder

What if the digits add up to 4?

22

How many different numbers are there now?

Learning Objective:

- Solve a given problem by organising and interpreting data in a simple table.
- Write whole numbers in figures; know what each digit represents.
- Order whole numbers.

Ben's numbers

If they add up to 6?

Such as

33

How many different numbers are there now?

Learning Objective:

- Solve a given problem by organising and interpreting data in a simple table.
- Write whole numbers in figures; know what each digit represents.
- Order whole numbers.

Solution to Ben's numbers

There are 16 different numbers in Ben's list for adding up to 5

5, 14, 23, 32, 41, 113, 122, 131, 212, 221, 311, 1112, 1121, 1211, 2111, 11111.

Did you find any others? How many did you find which add up to 4 or 6?

Learning Objective:

- Solve a given problem by organising and interpreting data in a simple table.
- Write whole numbers in figures; know what each digit represents.
- Order whole numbers.

Thank You

The background is a smooth gradient of blue, transitioning from a darker shade on the left to a lighter, cyan shade on the right. At the bottom, there are several overlapping, wavy bands. The topmost band is a bright yellow, followed by a light blue band, and then a white band at the very bottom. The overall effect is clean and modern.

References and additional resources.

These units were organised using advice given at:

http://www.edu.dudley.gov.uk/numeracy/problem_solving/Challenges%20and%20Blocks.doc

PowerPoint template published by www.ksosoft.com

These Mental Maths challenges can be found as a PDF file at :

http://www.edu.dudley.gov.uk/numeracy/problem_solving/Mathematical%20Challenges%20Book.pdf

The questions from this PowerPoint came from:

Mathematical challenges for able pupils in Key Stages 1 and 2

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