

Problem of the Week: Week 5 (Sum1): Year 7: Number

- Order positive and negative integers, decimals and fractions; use the number line as a model for ordering of the real numbers; use the symbols =, ≠, <, >, ≤, ≥
- Use the four operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative
- Work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 7/2 or 0.375 and 3/8)

Forgot the Numbers

On my calculator I divided one whole number by another whole number and got the answer 3.125

I know that both numbers were less than 50 but can't remember what they were.

Can you work out what they were?

<https://nrich.maths.org/1015>

Solution

$\frac{25}{8} = 3.125$ so the numbers are 25 and 8

Other possibilities for 3.125 as the quotient are all 50 or more

(e.g. $50 \div 16 = 3.125$; $75 \div 24 = 3.125$ etc)

Magic Squares

8	1	6
3	5	7
4	9	2

This is a magic square
All the rows , columns and two diagonals add up to the same (magic) total.
What is the magic number ?

	$1\frac{1}{2}$	$\frac{1}{3}$
$1\frac{1}{3}$		

This is a magic square
All the rows , columns and two diagonals add up to the same (magic) total.
The magic number is $4\frac{1}{2}$
Fill in the empty boxes

Solution

.1. Magic number is 15

.2.

$\frac{1}{2}$	$2\frac{1}{3}$	$1\frac{2}{3}$
$2\frac{2}{3}$	$1\frac{1}{2}$	$\frac{1}{3}$
$1\frac{1}{3}$	$\frac{2}{3}$	$2\frac{1}{2}$

Make 200

1 2 3 4 5 6 7 8 9

Chose four of these digits
Each one must be different
Put one digit in each box

This makes two 2-digit numbers reading across and two 2-digit numbers reading down.

Add up all four numbers.

e.g.

The total is 100

$$12 + 47 + 14 + 27 = 100$$

1	2
4	7

How many different ways of making 200 can you find?

Sample Solutions

1	9
7	2

7	1
3	8

There are 22 different solutions....