Problems of the Day *Day 20 Answers*

1 Complete these number sentences.

$25 + 25 + 25 + 25 = \boxed{4} \times 25$

$10 + 10 + 10 + 10 = \boxed{8} \times 5$

$25 + 25 + 25 + 25 = \boxed{20} \times 5$

$25 + 25 + 25 + 25 = \boxed{1} \times 100$

$25 + 25 - 25 - 25 = \boxed{0} \times 25$

2 Louise is thinking of a 4-digit number.
Here are some clues to the number.

The number lies between 4,000 and 5,000

All the digits are different

The digit in the tens place is twice the digit in the thousands place

The sum of the digits is 24

The number is odd

What could Louise's number be?

First of all, I look to see if I know any digits to get me going.

I know the number is between 4000 and 5000, so the first digit must be 4

4	_	_	_

I then look to see if I can work out a second digit.

I know the number in the tens place is twice that of the thousands place. It must be 8

4	_	8	_

I know the digits sum to 24. The two I know sum to 12, so the other two must sum to 12 as well.

They could be:

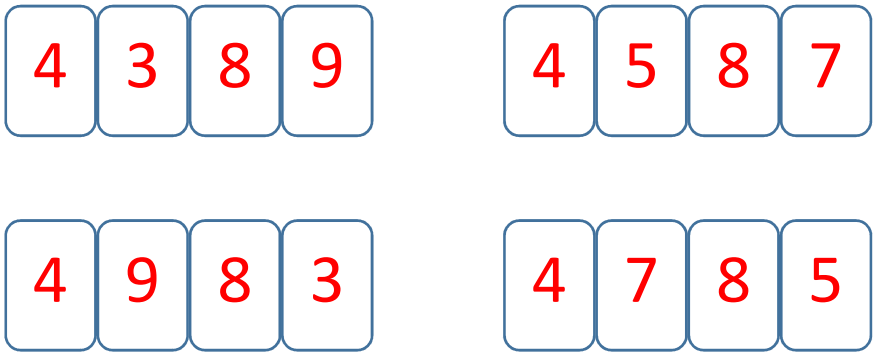
3 and 9 4 and 8 5 and 7 6 and 6

The digits must all be different so I can rule out 6 & 6 and 4 & 8

That leaves me with 3 and 9 or 5 and 7

The number must be odd – and all of these digits are odd numbers, so the final digit could be any of these.

This leaves me with four possibilities:



I now check all of these possibilities using the original clues in the question.

All of them meet the criteria in the question, so Louise's number could be any of these four numbers.