Problem of the Week #3

Two Two-Digit Numbers

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Two two-digit numbers have the same digits.

The sum of the digits of each number is 10.

The difference between the numbers is 18.

What are the numbers?

Problem of the Week #4

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Insert two digits so that this number is divisible by nine without leaving a remainder

4 5 _ _ 8

Teachers Notes:

Problem 3:

List two-digit numbers whose digits add up to 10.

19, 91; 28, 82; 37, 73; 46, 64; 55, 55.

Calculate the difference between each 64 - 46 = 18.

Problem 4:

To be divisible by nine the sum of the digits must equal nine or a multiple of nine. Currently the digits 4, 5 and 8 total 17, so one solution would be inserting the digits 0 and 1, because this would make the digit sum of 18.

A digit sum of 27 would indicate that a number is divisble by 9. Therefore any combination of two digits that add to ten (adding to the current digit sum of 17) would work e.g. (1,9), (9,1), (5,5), (4,6) etc.

Australian Curriculum Links

Depending on the approach adopted by the students, they may use parts of the following content descriptor/s

Year 5 ACMNA098

Identify and describe factors and multiples of whole numbers and use them to solve problems.

> Elaboration: using simple divisibility tests