



## Pandigital products

### Problem 32

We shall say that an  $n$ -digit number is pandigital if it makes use of all the digits 1 to  $n$  exactly once; for example, the 5-digit number, 15234, is 1 through 5 pandigital.

The product 7254 is unusual, as the identity,  $39 \times 186 = 7254$ , containing multiplicand, multiplier, and product is 1 through 9 pandigital.

Find the sum of all products whose multiplicand/multiplier/product identity can be written as a 1 through 9 pandigital.

HINT: Some products can be obtained in more than one way so be sure to only include it once in your sum.