



Sub-string divisibility

Problem 43

The number, 1406357289, is a 0 to 9 pandigital number because it is made up of each of the digits 0 to 9 in some order, but it also has a rather interesting sub-string divisibility property.

Let d_1 be the 1st digit, d_2 be the 2nd digit, and so on. In this way, we note the following:

- $d_2d_3d_4=406$ is divisible by 2
- $d_3d_4d_5=063$ is divisible by 3
- $d_4d_5d_6=635$ is divisible by 5
- $d_5d_6d_7=357$ is divisible by 7
- $d_6d_7d_8=572$ is divisible by 11
- $d_7d_8d_9=728$ is divisible by 13
- $d_8d_9d_{10}=289$ is divisible by 17

Find the sum of all 0 to 9 pandigital numbers with this property.