



Factorial digit sum

Problem 20

21 June 2002

$n!$ means $n \times (n - 1) \times \dots \times 3 \times 2 \times 1$

For example, $10! = 10 \times 9 \times \dots \times 3 \times 2 \times 1 = 3628800$,
and the sum of the digits in the number $10!$ is $3 + 6 + 2 + 8 + 8 + 0 + 0 = 27$.

Find the sum of the digits in the number $100!$