



Age 14+ Level ★★★
Worksheet 1

1. Number Crunch

If you choose any four different non-zero digits, you can arrange them to form 24 different four-digit numbers.

If you were to add these 24 numbers, your answer would be a multiple of 101. Can you explain why?

2. How Many Gorillas?

A newspaper article about the wildlife in an African country contains the sentence "The number of gorillas has fallen by 70% in the last 10 years, and there are now only around 5000 left."

If 70% has been given to the nearest 1%, and the number of gorillas left now is correct to the nearest 1000, then what is the largest number of gorillas that there could have been 10 years ago?

These problems are adapted from UKMT (ukmt.org.uk) and WMC (competition.ac) problems.