Welcome to this week's Maths Challenge!

Have a go at both questions!

Drop your solution in the box in the staffroom by Tuesday.

Year 8 and below

The pages of a book are numbered; 1, 2, 3, ...

It takes 852 digits to number all the pages of the book.

What is the number of the last page of the book?

Year 9 and above

How many set of three positive integers, a, b, c satisfy the following two conditions simultaneously?

$$6ab = c^2 \tag{1}$$

$$a < b < c \leq 35 \tag{2}$$