



2023



新年快乐

Welcome to the Chinese New Year Maths Challenge!

Have a go at both questions!

Drop your solution in the box in the staffroom by Tuesday 31st January.



Year 9 and below

A game begins with 100 people standing in a circle. One person holds a ball, call them person Number 1, and then number the other players consecutively anticlockwise: the person to the ball-holder's left is No. 100, to their right stands person No. 2.

The person holding the ball throws it over the head of the first person on their right, the person on the other side catches it. So at the start No. 1 throws to No. 3.

A person skipped by the ball, immediately leaves the circle for tea and chocolate biscuits.

So person No. 3 would be the next holder of the ball. No. 3 throws to No. 5 and No. 4 leaves the circle.

The process continues until there is one person left in the circle. If there are only two people left, the person holding the ball throws to themselves, eliminating the other person.

What is the number of the last person in the circle?

Year 10 and above

One hundred people take part in a race in which no-one can tie. Later, after the race, every competitor is asked about what position they came, and all answer, giving a number between 1 and 100. The sum of all their answers is 4000. What is the minimum number of people who have lied about what position in the race they achieved?