

## Test 1

### **Problem 1**

In Chinese villages it's allowed to have two children in case if your first child is girl. So please find the percentage of boys and girls in Chinese villages

### **Problem 2**

Find the number of vertices and verges of n-dimensional cube and octohedron

## Test 2

### **Problem 1**

P is linear operator in  $R^n$  such that  $P^2 = \frac{1}{2}P$  Can P be diagonalizable?

### **Problem 2**

Find the number of the integer solutions of the equation  $x_1 + x_2 + \dots + x_n = n$  where  $x_i \geq 0$  and  $x_i \in \mathbb{Z}$