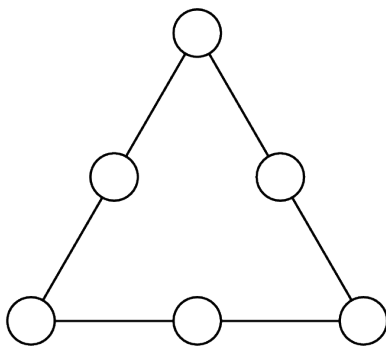# MATH 7: THE MATH BATTLE

1. There are 10 students in a class and they are given an exam with 10 problems in it. Each student solves a different number of problems and a total of 50 problems are solved by all students together. John solved problems 1-5. Did he also solve some other problem?

2. A 179×57 rectangle is divided into 1×1 squares. If we draw a diagonal in this rectangle, how many squares will it intersect?

3. One line divides a plane into 2 areas. Two line can divide plane into 4 areas. What is the minimal number of lines to divide a plane into 50 areas?

4. If numbers $10 - 15$ are placed on the sides of the triangle so that each side adds up to the same number, what is the largest sum each side can have?

5. What is the remainder of 2014^{2016} after division by 5?

6. In a square with the side 3, CM and CN divide its area into 3 equal parts. What is the length of CM?