

Lesson 6: Games and Geometry

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Problem 1.

Two players are playing a game. Initially, the number 1 is written on the board. A move consist of adding any number from 1 to 5 to the current number. The person who makes the number on the board equal to 30 wins. Who has a winning strategy – the first player, or his opponent?

Problem 2.

Two players are playing on a 9×9 board by placing stones in the squares. It is not allowed to place a stone on a square if it already has one, or if it is adjacent to a square with a stone. Who has a winning strategy?

Problem 3.

Two players place rooks on the 8×8 chess board. The person after whose turn all squares of the board are attacked by rooks wins. Who has a winning strategy?

Problem 4.

Kiselev 104, page 84.

Problem 5.

Kiselev 107, page 85.

Problem 6.

Kiselev 111, page 88.