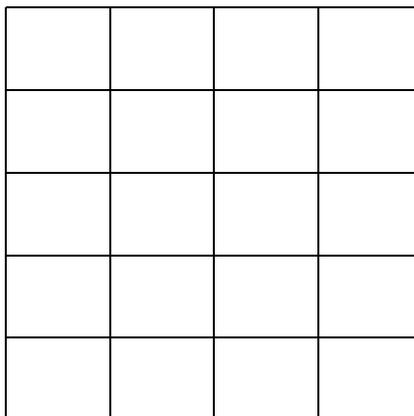1. This game begins with the number 0. Each turn consists of adding to the current number a whole number from 1 to 9. The player who reaches 100 wins.

2. This game begins with the number 1. A turn consists of multiplying the current number by a number between 2 and 9. The first player who reaches a number greater than 1000 wins.

3. This game begins with 1000 counters. A turn consists of removing any power of 2 number of counters. Who wins and how do they win.

4. This game is played with one knight on a chess board. The first player places the knight on the board. The second player then moves the knight to a new square; that is, to one which has not previously been occupied. Players alternate, each time moving to a **new** square. The first player who cannot move loses. Who wins with best play?

5. The game of Kayles. Kayles is an old English name for skittles or (bowling) pins. Two players are confronted with a row of pins. Their skill is such that they can knock down any one pin or any two adjacent ones. As usual the player who knocks down the last pin is the winner. Denoting pins by \$, a game might go as follows: \$\$\$\$\$\$ → \$\$_\$\$\$ → \$__\$\$\$ → ___\$\$\$ → ___\$_\$ → _____\$ so that the second player wins this game. Who should win the game which starts \$\$_\$\$\$\$\$\$?

6. Cram. This game is played by two persons on a 4×5 grid of squares. Players alternate putting a domino on the board so that it covers exactly two squares and does not overlap any already on the board. As usual, the last player to move is the winner.

Who wins with best play and how?