Robot Rule Game

Number of Players: 2

Objective: Determine your opponent's Robot Rule.

Instructions:
1. Each player writes a secret Robot Rule on a separate piece of paper (e.g., multiply by 2).
2. Player A writes an input number in the first row of Robot Chart A and uses their rule on the input to determine the output number.
3. Player B guesses the rule and wins if the rule is correct. Otherwise, Player B writes an input number in the first row of Robot Chart B and uses their secret Robot Rule on the input to determine the output number.
4. Player A guesses the rule and wins if the rule is correct.
5. Play continues with A and B taking turns writing input and output clues then guessing the rule.
6. The game ends when one player correctly determines their opponent's secret Robot Rule.
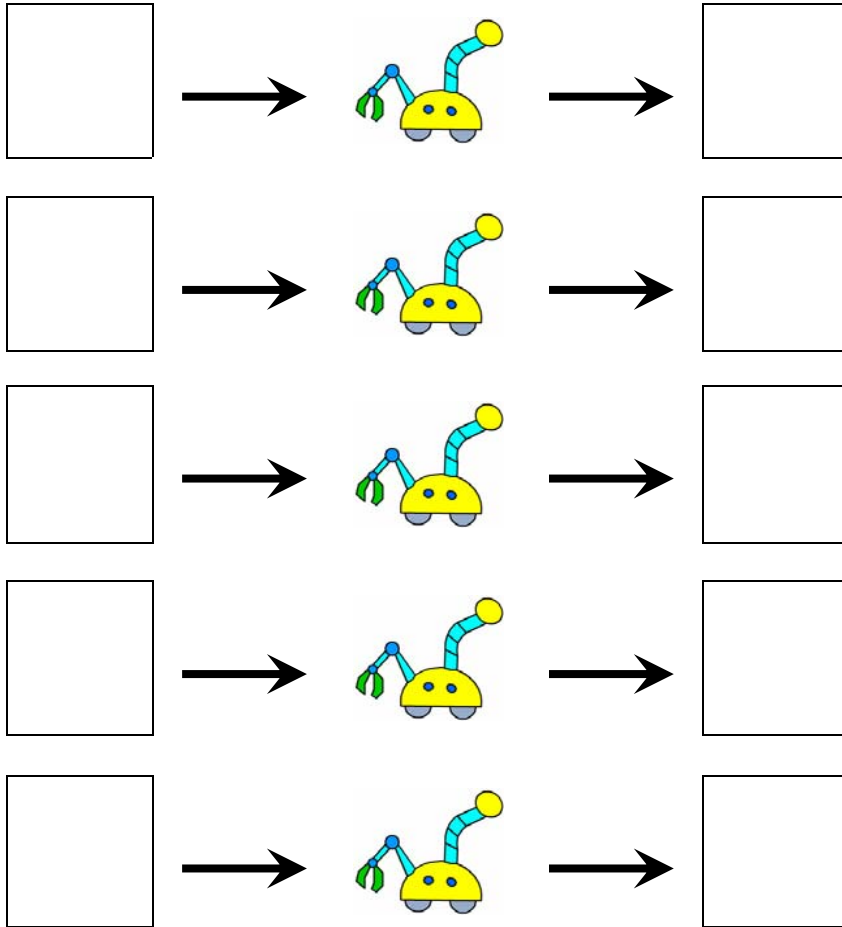
Variations:
1. Pick the type of rule allowed before starting play.
   Examples:
   a. multiply by a number,
   b. multiply by a number then add a number,
   c. any operation (e.g., square the number),
   d. any two operations (e.g., cube the number then add 2).

2. After the first two turns, the opponent gets to choose the input number.

3. Choose the numbers that can be used for input (e.g., numbers between 2 and 10).

4. Use the variable x to represent the input, and the variable y to represent the output. State the Robot Rule as an equation (e.g., $y = 3x + 1$).
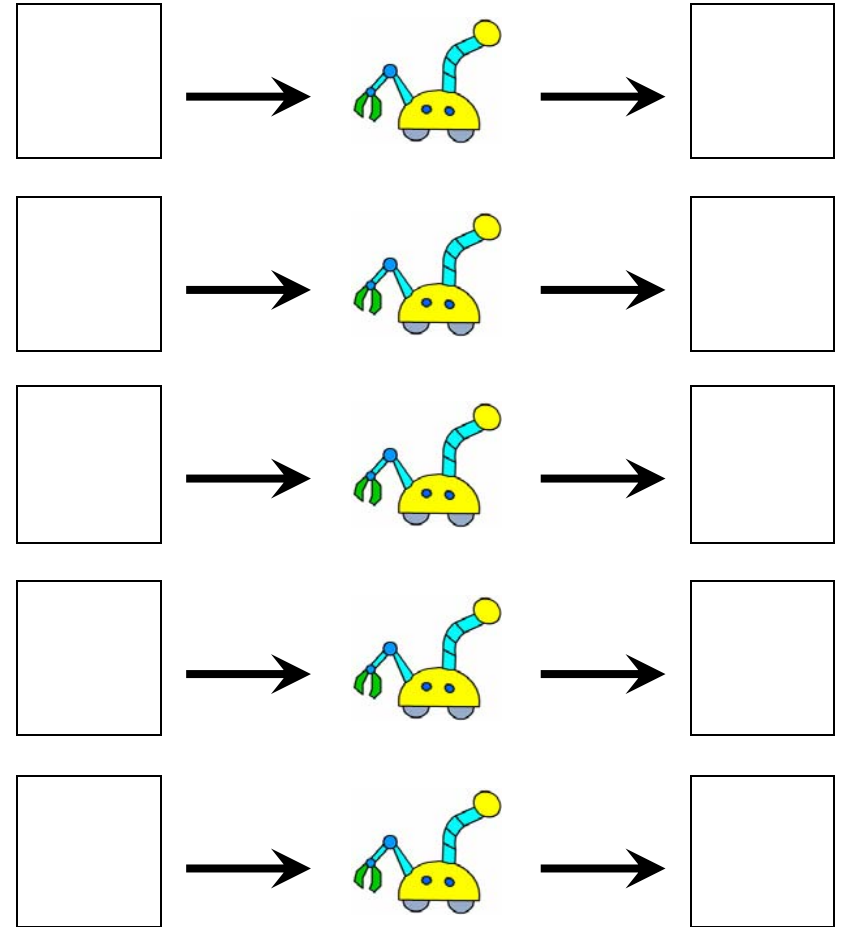
Robot Chart A

Input   **Output**

The Robot's Rule is:

Robot Chart B

Input   **Output**

The Robot's Rule is: