

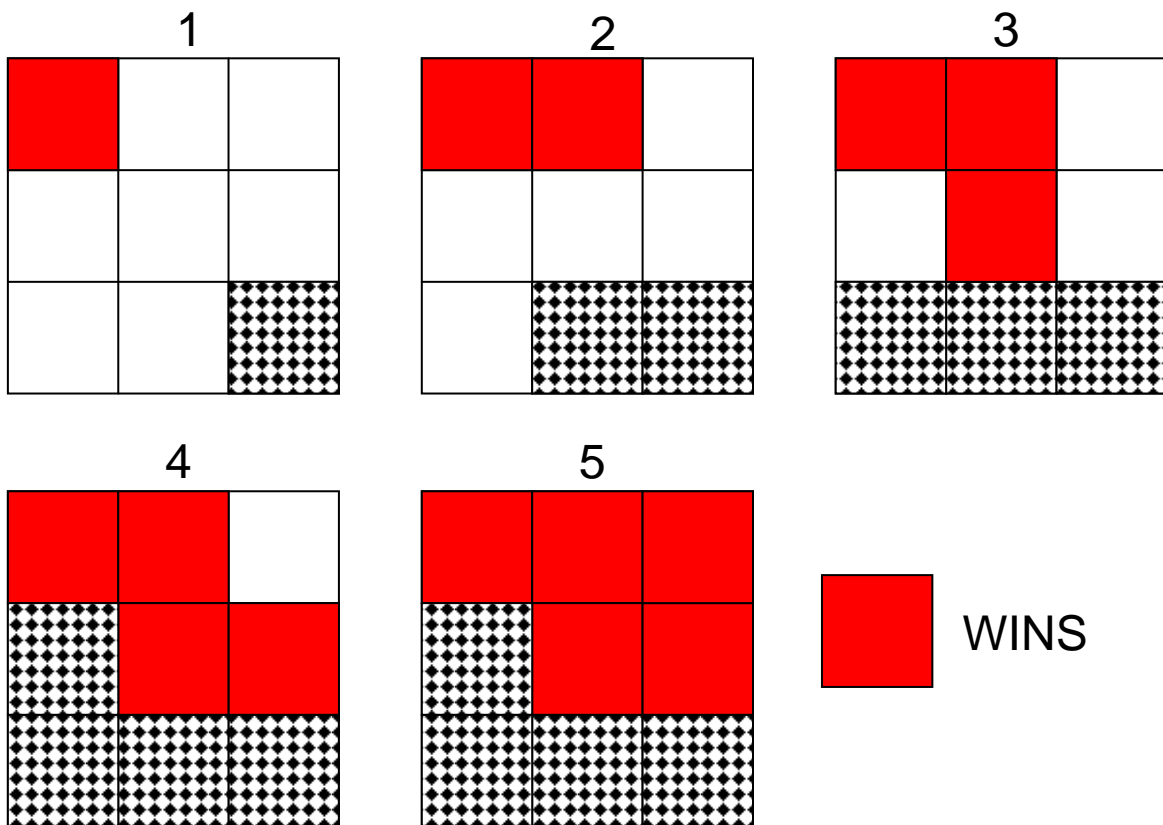
Homework 01: Science is like a game...

“We can imagine that this complicated array of moving things which constitutes "the world" is something like a great chess game being played by the gods, and we are observers of the game. We do not know what the rules of the game are; all we are allowed to do is to *watch* the playing. Of course, if we watch long enough, we may eventually catch on to a few of the rules. *The rules of the game* are what we mean by *fundamental physics*... (However) what we can really explain in terms of those rules is very limited, because almost all situations are so enormously complicated that we cannot follow the plays of the game using the rules, much less tell what is going to happen next. We must, therefore, limit ourselves to the more basic question of the rules of the game. If we know the rules, we consider that we "understand" the world.”

- Nobel Physics Prize Laureate Richard Feynman from “The Feynman Lectures”
Chapter 2 Introduction

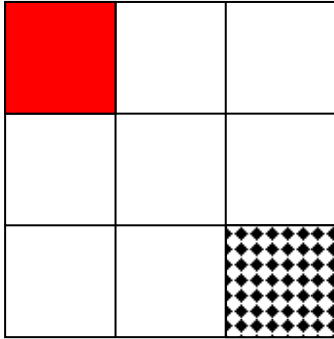
On the following pages you will be given the moves in some game as a model of “science.”
Your ultimate goal is to determine the rules of the game by only watching the game moves.

Game 1:

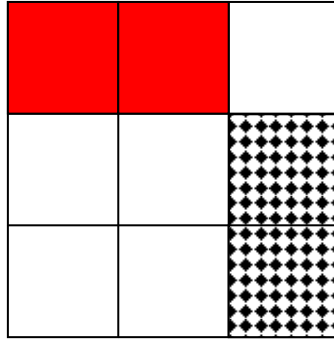


Game 2:

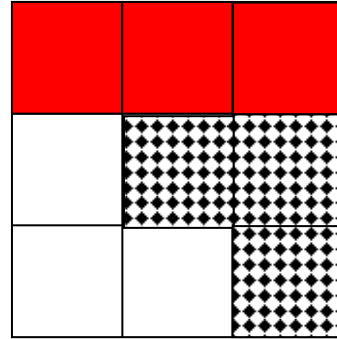
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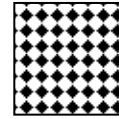
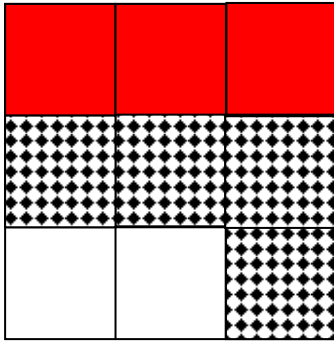
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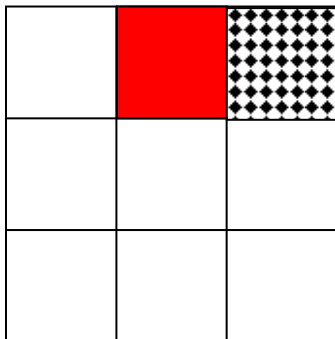
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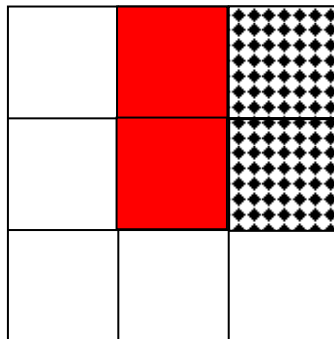
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Game 3:

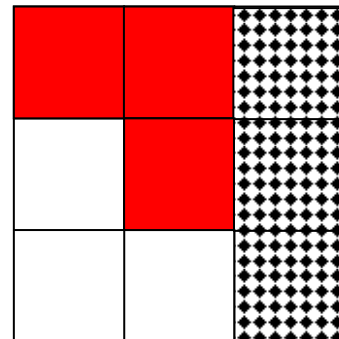
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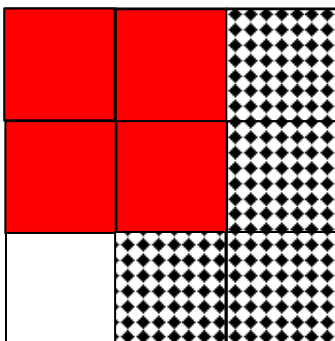
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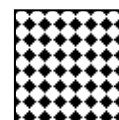
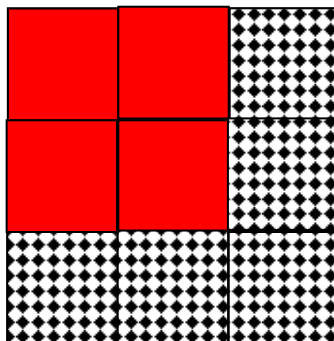
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4



5



WINS

Name _____

What do you think are the rules to this game? Please clearly list the rules you think the game has to follow.

In game 3, why do you think “dots” filled the last square instead of “solid” in round 5? Explain.