

A Game of Pig

The object of the game is to score the most points after 10 rounds of dice rolls. Your score is equal to the sum of all the dice that you roll. If you roll 5 then 5 then 3 then 2 your score is at 15. Your turn starts with a single die roll. You are allowed to keep rolling with the following restrictions:

- If you roll 6 at any time, another die is added to your pool. After the first 6, you will have two die to roll, after the second 6, you will have three to roll. Keep in mind if you roll more than one 6, more than one die is added.
- If you roll 1 at any time, your turn is immediately over, and your score for that turn is 0. It does not matter if it is the first roll or the twentieth.
- You may stop your turn after any single roll, record your score, and pass play to the next player.

One a separate piece of paper, answer the following questions

1. Regardless of who won, what kind of strategies were most successful? Least successful? Explain why you think so.
2. How does your strategy change as you roll more 6's? How many dice are too dangerous to keep rolling?
3. How would your strategy change if you only lost when you rolled at least two 1's at the same time?
4. Is there any probability involved in your strategies?