Craps Simulator

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The Game
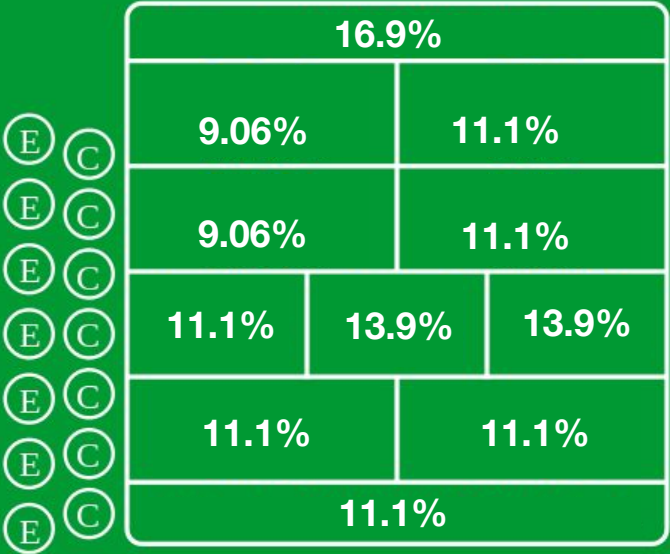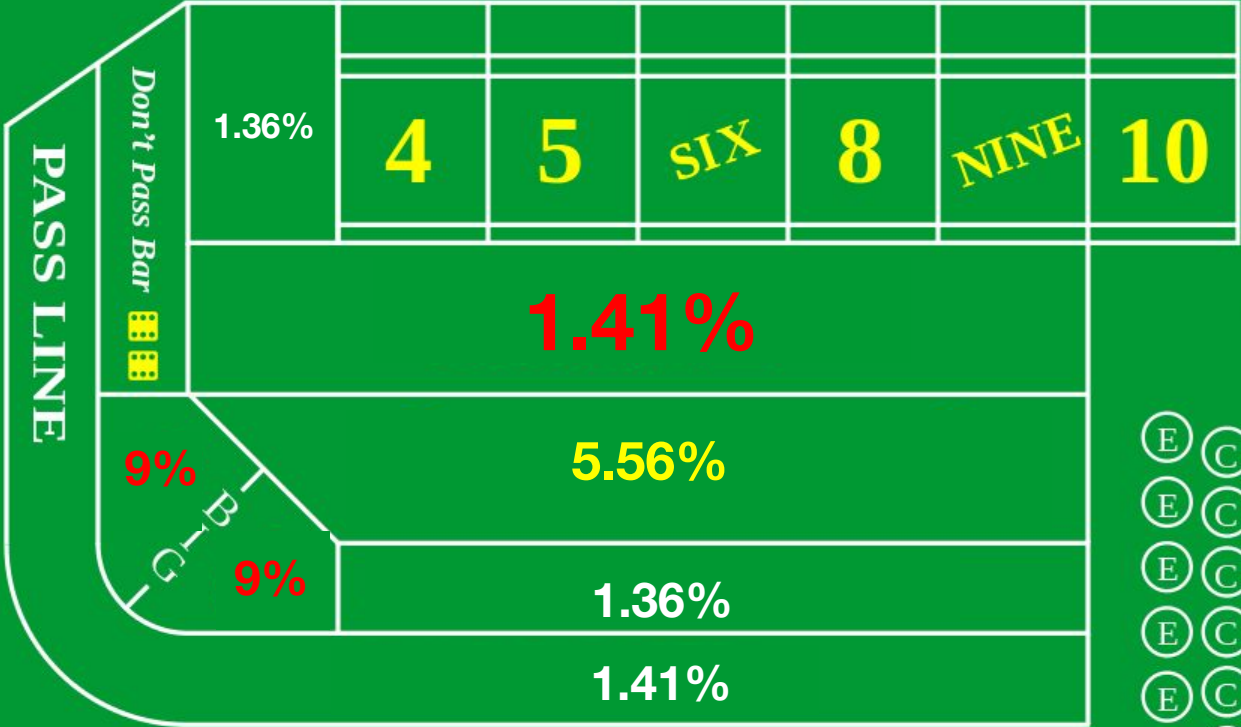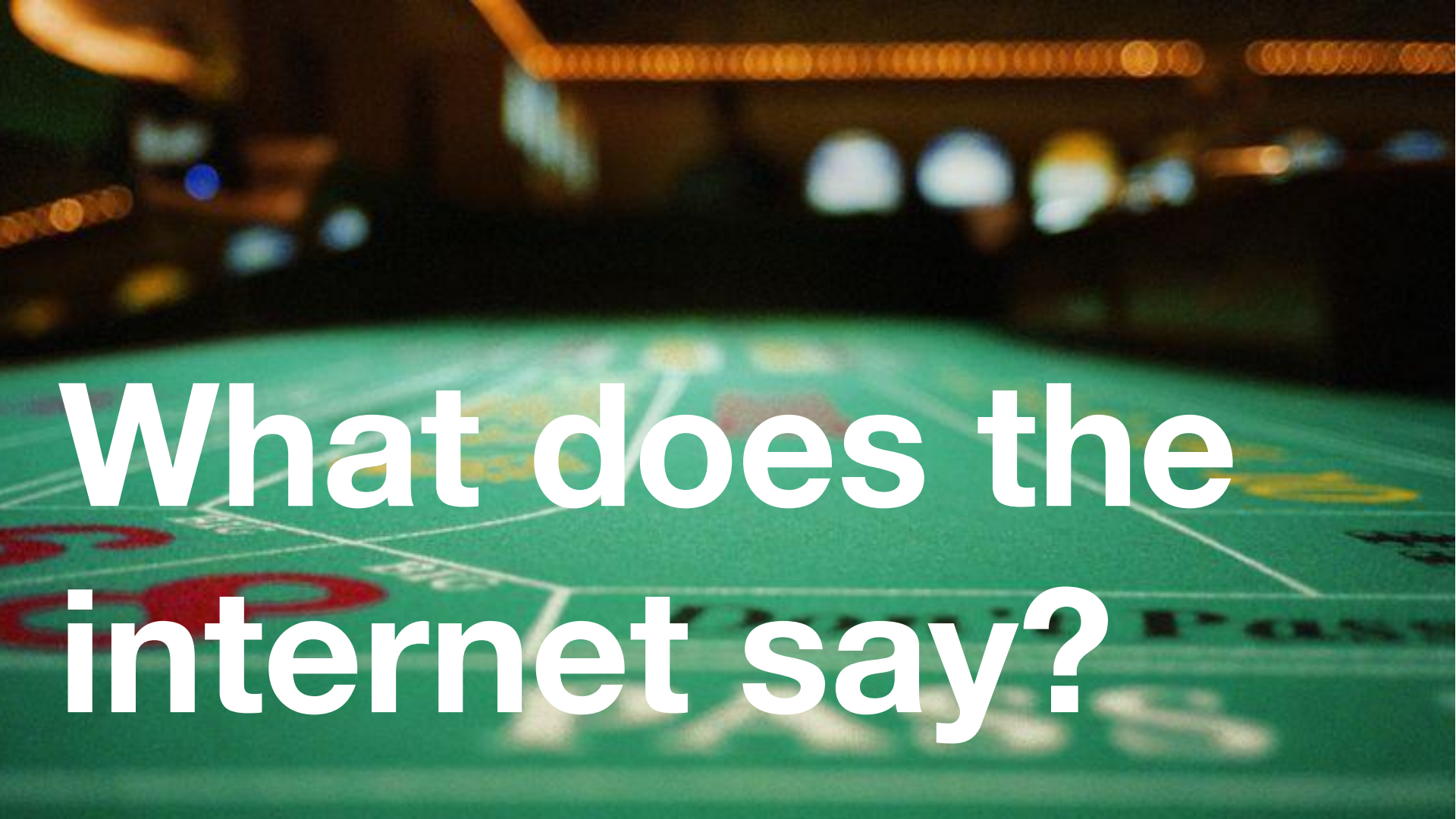
House Edge

How we Measure Effective Strategy

- **Theoretical Expectation: in theory how much you will win/lose**
  - **Can be difficult to calculate for complicated strategies**
- **Average Profit: what you can expect on average**
  - **Calculated from simulations**
- **Probability of a Positive Profit: the percentage of time you will win money**
  - **Also calculated from simulations**

What does the internet say?

Strategy 1:
Martingale in the Field

MrRetro607080 1 month ago
Wait for at least 5 non field numbers in a row.Then start betting on field. Less chance to loose all the progression

Mike LoVetere 1 month ago
I would wait for 2 or three non field numbers before beginning the progression....
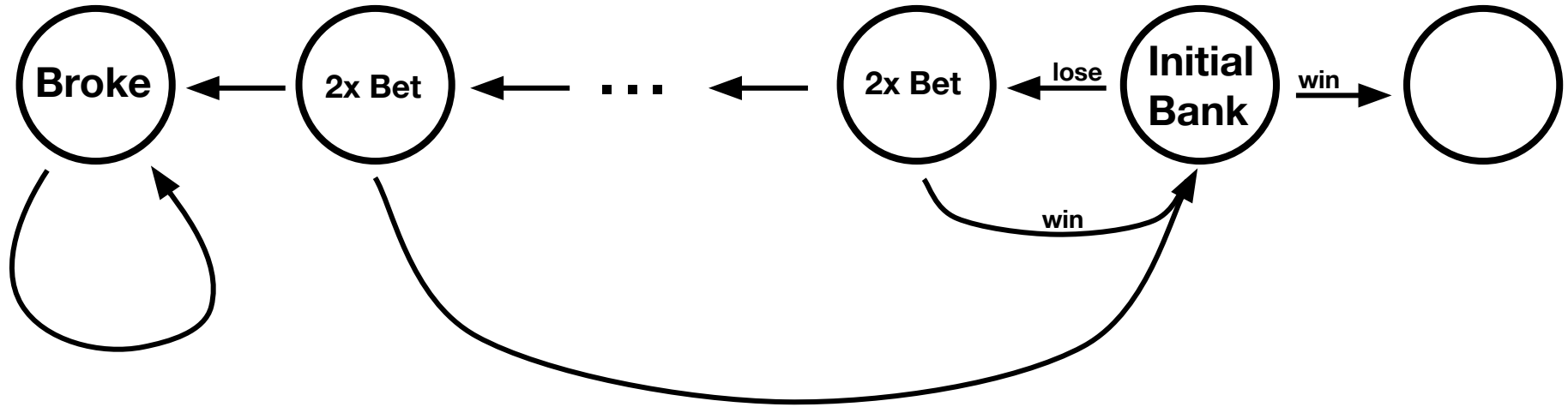
ffbowler300 2 months ago
LOL martingale systems are a sure way to go broke in a casino!! Thanks for the video as always though!!

α plus β equals γ 2 months ago
The rolls are independent right? So what's the point of waiting for a 5,6,7 or 8 first?

Strategy 1:
Martingale in the Field
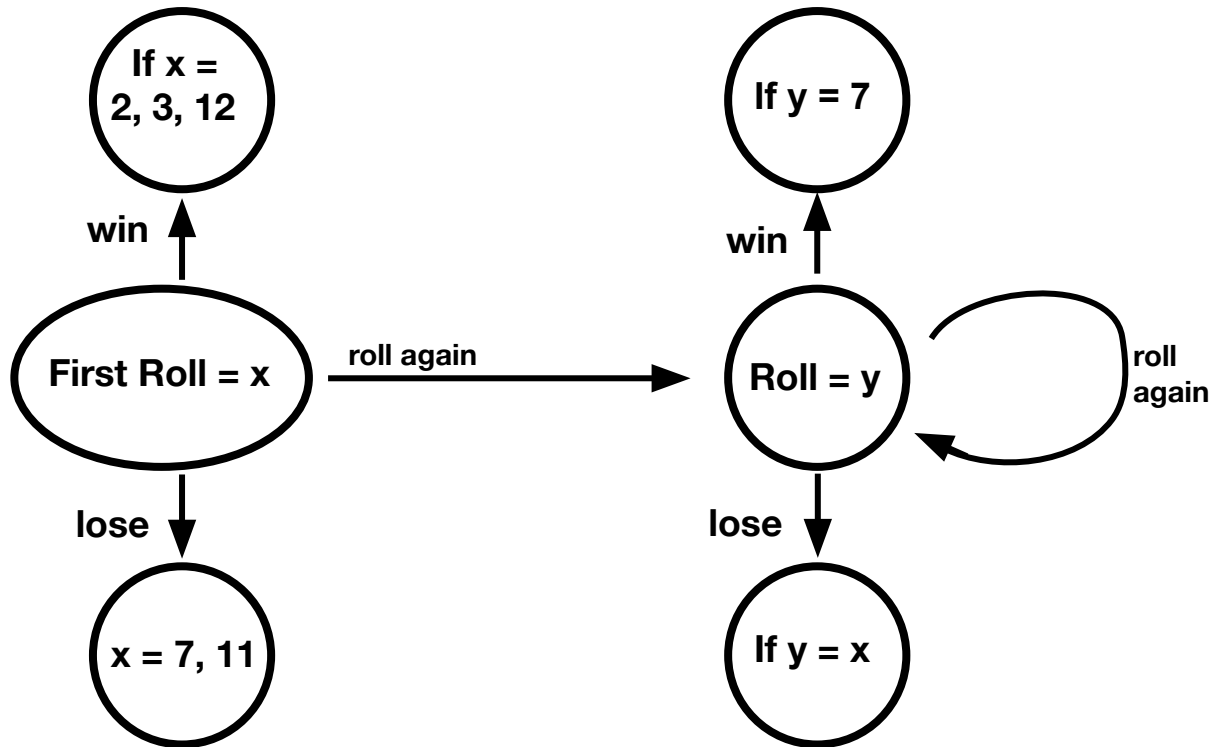
Strategy 1:
Martingale in the Field

Starting bank	$500
Average profit	-$25
Probability of positive profit	0.49

Strategy 2: The Darkside Lay

Strategy 2:
The Darkside Lay

Starting bank	$500
Average profit	-$122
Probability of positive profit	0.37

What about common sense?

House Edge
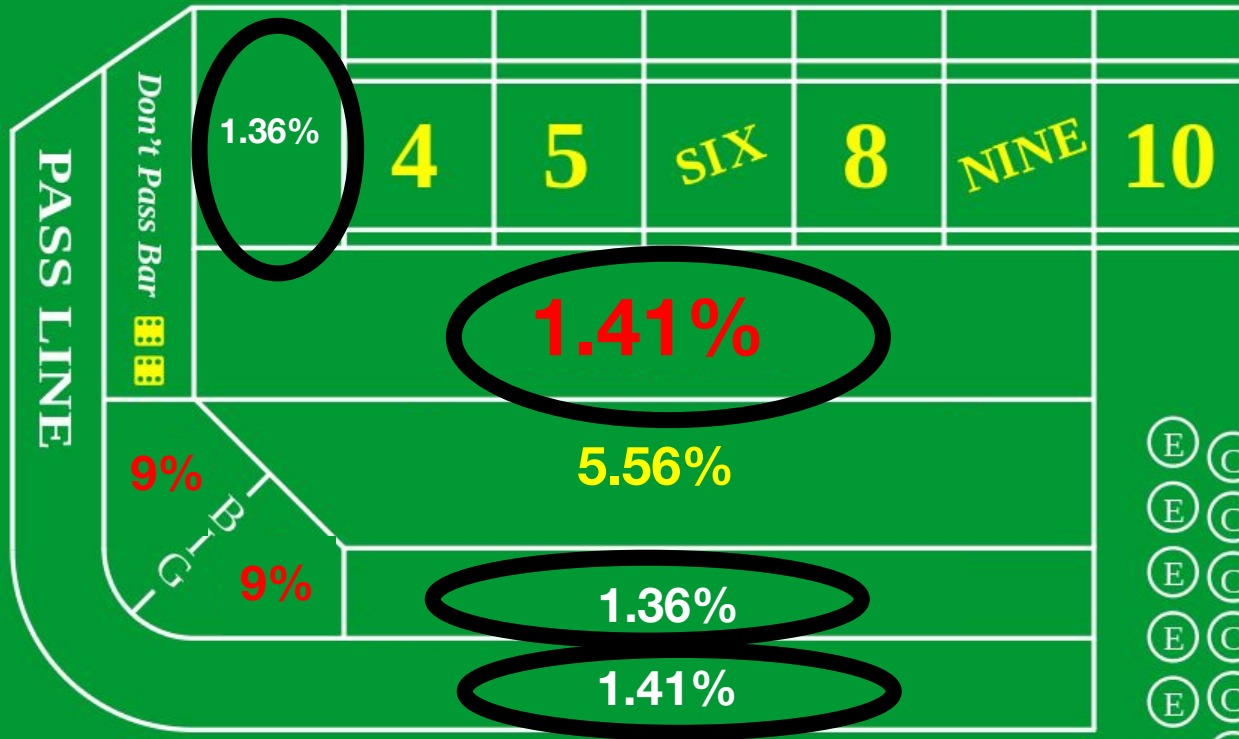
Strategy 3:
Pass Line Bet with Odds

- Pass Line Bet
  - 1st roll:
    - Want: 2, 3, or 12
    - Don't want: 7 or 11
  - After 1st roll: if the first roll is anything other than 2, 3, 7, 11, or 12
    - Our first roll becomes our "point". Now we want to roll this point before we roll a 7.
  - Then, we can bet "odds" on the established point, winning if the point is rolled, and losing if a 7 is rolled
- Example:
  - 1st roll: 5 => this becomes our point
  - Now we keep rolling until either a 5 or 7 is rolled. Ignore all other numbers.

Strategy 3:
Pass Line Bet with Odds

Starting bank	$500
Average profit	-$66
Probability of positive profit	0.17

Conclusion

- **Every possible betting strategy has one thing in common: you can expect to lose money in the long run**
- **In the short run: craps is a game of large variation and so it is easy to win and lose money in big chunks.**
  - **Standard deviation can be 20x the expected value of winnings.**

Who has questions?