

Chapter 5 Lab: Powerball

Powerball is a multistate lottery game that consists of drawing five distinct whole numbers from the numbers 1 through 69 in any order. Then one more number from the numbers 1 through 26 is selected as the Powerball number (this number could be one of the original five). Powerball numbers are drawn every Wednesday and Saturday. If you match all six numbers, you win the jackpot, which is worth at least \$40 million. Is the possibility of millions of dollars' worth the cost of the \$2 per game ticket?

A Powerball simulator can be found at http://adamlamers.com/lottery_simulator

Using the simulator complete the following simulations:

- Two simulations with random numbers (run each for 50 years)
- Two simulations with numbers of your choice (run each for 50 years)
- For each simulation, you should only use a single ticket

Fill in the appropriate tables on the excel file (emailed to you), after each simulation is complete.

Your Number Picks (1st Trial)				
Jackpot: \$1,400,000,000				
Your Numbers:	_____	_____	_____	_____ <small>Powerball</small>
Total Drawings:	_____			
Total Spent:	\$ _____			
Total Winnings:	\$ _____			
Time Spent Playing:	50 Years			
Actual Win Odds	1:	_____		
RDI: <small>Return on Investment</small>	_____ %			
Win Options	# of Wins	\$ Won	Actual Odds	Record Wins Above
5 White + Powerball	_____	\$ _____	1: _____	\$2
5 White	_____	\$ _____	1: _____	
4 White + Powerball	_____	\$ _____	1: _____	
4 White	_____	\$ _____	1: _____	
3 White + Powerball	_____	\$ _____	1: _____	
3 White	_____	\$ _____	1: _____	
2 White + Powerball	_____	\$ _____	1: _____	
1 White + Powerball	_____	\$ _____	1: _____	
Powerball Only	_____	\$ _____	1: _____	

Based on the data from your four simulations, answer the following questions:

1. What was your average money spent? Average money won?
2. How close were your frequencies to the actual odds?
3. In your opinion, do you believe playing powerball is worth it? Explain.