

Project 2: Design Your Own Game

In this assignment, you need to design your own game. The game should be the type of game that you would play from buying lottery tickets, at a carnival or an amusement park. You must be able to explain the probability of your game, so don't make it too complicated!

Final Products:

1. **Game** – Give a name for your game. The game must involve probability.
 2. **Instructions** - You must create a set of typed simple instructions or rules to clearly explain your game. They must be easy to follow so that anyone can pick them up, read them and begin playing your game.
 3. Introduction - Provide an overview of your game.
 - ✓ What type of game is it?
 - ✓ Probability Analysis. **List all the prizes in dollar amount** and the probability of winning each prize. Let x be the random variable that represent the prize. Give the probability distribution of x .
 - ✓ Is the game fair? Find the **expected value** and variance of the prize.
 - ✓ Decide the cost to play so it is reasonably fair.
 4. Simple Reflection
 - Did this project enhance your understanding of probability? What is your opinion about Las Vegas and the gaming industry?
1. Make sure instructions are clear and easy to follow. Don't make it too complicated.
 2. Provide the calculation for expected value, variance, and decide the cost of each game.
 3. The work is presented in a neat, clear, organized fashion that is easy to read.
 4. Submit it online in PDF file.