



GRADE 12 ESSENTIAL PROBABILITY PROJECT

Devise a game involving some random generator (drawing cards, rolling dice, spinner, random number generator on calculator) ,a method on which you can perform probability calculations (like predicting a certain roll, or certain cards) and / or experimental probability (like throwing a bean bag). The game should involve at least two possible ways to win. For example rolling a five gets three ‘tokens’, rolling a six gets five ‘tokens’.

In a neatly written submission

- a. clearly state the equipment required and how it generates an event; a diagram is useful;
- b. clearly state the rules of how to play the game;
- c. accurately show the calculations for the expected value for the player;
- d. actually play the game *at least* 30 times (with imaginary \$ or tokens) and **record** the results in each game of \$ won and \$ lost in a **neat table** format;
- e. explain how you might enhance the game to make it more interesting to better entice the player while relieving them of even more money; and
- f. be prepared to fully explain your game and results to your teacher and classmates at the front of the class.

Teams. Work in pairs (threes max). Ensure the names of the team are on the submission.

Consult. Consult teacher with outline of game before proceeding too far to make sure it is not too difficult or too easy.



Team Names:

RUBRIC

Challenge of Game	1 – 10 (1 too easy)	
Originality	1 - 5 Fun? Weird, attractive? Attention Getting?	
Presentation and Neatness	1 – 10 Barely Legible to Very Neat	
Explanation	1 – 10 Complete, Comprehensible, proper grammar, punctuation, clear, concise	
EV Calculations	1 – 10 Correct, complete, neat	
Enhancement to game What can you do to make it more appealing but still suck money out of people?	1 – 5 Will it fool enough people? Will it make you extra revenue?	
Presentation to class (or teacher)	1 – 10 Confident, complete, answers questions	
	TOTAL:	