Math 12 Probability Assignment

Hey gang. Hope everyone had a good spring break and you’re all rested up and ready to finish of math and graduate in about 50 school days! Our next unit deals with probability, which in case you forgot, is basically just what are the odds of something happening, like getting a 6 if you roll a dice.

Your assignment while I’m gone, don’t worry I’m back Wednesday, is to play some games and then find some games. See pretty easy and I’m pretty sure you’ll enjoy this.

Part A: Below is list of a few websites I found that have games that involve probability. I’m not looking for anything like rocket science here I just want you get used to seeing how this stuff works. Examples of real life things that involve this, and a project we’re going to do, are blackjack or 21 (the card game). This is probability because if you want to take another card or not and what are the ‘chances’ of that card making you bust. Casino games are all about probability. Other things that involve probability are coin draw games, or colored marbles in a bag, the goat and car problem, the list is endless.

Anyway this unit is going to be all about games, and solving them to give us the best odds. Anyways I’d like you’re to try some of the following below today: **THIS IS POSTED ON MY SITE IF YOU’D PREFER TO JUST DOWNLOAD IT AND CLICK THE LINKS INSTEAD OF TYPING THEM IN!**

* Blackjack: I’ve got cards up front. You want to bet the dealer without going over 21. If you’re not too sure of the rules feel free to google them.
* <http://www.tvdsb.ca/webpages/cmacintosh/mathematics.cfm?subpage=193944> This link has a bunch of little games to try.
* Play yourself some tic-tac-toe. Is there a way you can always win, or at a minimum guarantee a tie?
* <http://www.btwaters.com/probab/probab.html> We are going to look at the Monty hall problem
* <http://www.education.com/activity/high-school/probability-statistics/>
* High/Low: A card game where you guess if the next card is higher or lower, or black or red based on the previous card.

Try a few of these a respond to the following questions:

1. What games did you play?
2. How did the games you play deal with probability?
3. Is there any way you could have increased you chances of winning whatever games you chose to play?
4. What strategies did you use to help yourself win?

**Part B**: **This is going to be done on Tuesday**. I want you to now, with your knowledge of odds/chance/probability to search the internet and find some games on your own that deal with odds and chance etc. If you already know one or two, great! Let me know them. If you’d prefer to invent one that’s cool as well. This portion should take about half of the class. Once you’ve done that please share them with other people in the class and have them play the ones you found, and you play theirs.

What games (yes more than one) did you find? Please provide the links or game titles here:

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Who did you switch with?(can be more than one person)

How did they like your games?

How did you like their games? How did the game work? Can you see how their game is a odds/chances kind of game?