Markov Student Worksheet

Your name: _____   Class Period _____
Partner's name if you have a partner: _____

Welcome to Data Games!

1) Watch the first short video introducing *Markov*
   - If your teacher wants you to watch this video on your own computer, type in this URL:
     http://tinyurl.com/MarkovVidOne

2) Open the game
   - Type in this URL to open *Markov*:
     http://tinyurl.com/markov-datagame

3) Click *Play* and see if you can rescue Madeline!

4) After you've played two or three games
   - Take a good look at the data in the graph to see how it can help you understand Markov's patterns.
   - (Q1) Are your moves being shown in the graph? (yes/no) _____

5) After you've defeated Markov
   - Congratulations!
   - Once you're confident you can use the data to beat Markov consistently, you should watch the second video to learn how to save Madeline faster.

6) Watch the second short video
   - If your teacher wants you to watch this video on your own computer, type in this URL:
     http://tinyurl.com/MarkovVidTwo

7) Set strategy
   - Click *Set Strategy* at the top of the game box, and use the method you saw in the video to choose the moves you want to make automatically.

8) Autoplay
   - Click *Back to Game* to go back to the main game screen. You can change the speed the game is played by setting the slider anywhere between *slow* and *fast*.
   - Then click *Autoplay*.

Your name: _____ Partner's name if any: _____

9) Revise strategy as needed
  • You may need to go back to the Set Strategy screen to change some moves.
  • Continue adjusting your strategy until you can consistently save Madeline using Autoplay.

10) Weight your moves
  • Now go into Set Strategy again and drag the weights around among the small boxes to weight the moves you feel most confident about.
  • This was a technique shown in the video that will speed up your winning strategy.

11) After you win
  • Congratulations, well done!
  • (Q2) Suppose you were asked to help out a friend who has played the game but hasn't yet figured out how to defeat Markov. Explain below to your friend how to use the data and win (without Set Strategy).

  • (Q3) Playing against Markov is frustrating sometimes, as he is not always consistent in his pattern of moves, right? Explain to your friend how you decided to make some of your moves even when you're not absolutely sure what Markov will do, based on looking at the data from previous games. Give an example from your data.

12) Ask your teacher if you should continue on and play higher levels of the *Markov* game.