Cart Weight 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 *Cart Weight*
   - If your teacher wants you to watch this video on your own computer, type in this URL:
     http://tinyurl.com/CartVidOne

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

3) Click *Play* and start guessing!
   - See if you can win on the first level by scoring over 250 points.

4) After you win on the first level, Dubuque
   - (Q1) What do you think is the highest possible score in each game? ____
   - (Q2) Are your guesses or scores shown in the graph? (yes/no) _____

5) 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/CartVidTwo

6) Move on to the second level, Ames
   - After you've ended a game on the Dubuque level, click *Levels* in the lower-right corner of the game box. Select the Ames level, and then click the black x in the top-right corner of the Levels box to go back to the main game screen.
   - Click *Clear Data* at the top of your screen, and then select *Yes, delete the data*. In the future, you should decide on your own when you want to clear the data.
   - Did you notice that we simplified things for you on the first level by giving the cart no weight? The cart will have a weight on all future levels.
   - You will to need score over 250 points to win on the Ames level and unlock the third level. Go ahead and click *New Game* and play again.

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

7) After playing two or three games on the Ames level
   - (Q3) Describe briefly how playing on this second level is different than playing on the first level.

   - (Q4) Looking at the data points for the most recent game on the graph, what type of relationship or function does there seem to be between the number of bricks and the total weight of the cart? _____
   - If you haven't done so already, choose **Show Movable Line** from the Gear menu in the upper-right corner of the Graph.
   - Adjust the line by dragging its top and bottom until it passes through your data points. Notice that the equation of this line is given.

8) Now try to score over 250 points in a new game on the Ames level by dragging the line and using its equation. You can also use the built-in Calculator by clicking the **Calc** icon in the menu at the top of the screen.

9) After you win on the Ames level, get set to play on the third level, Davenport.

10) Win on the Davenport level by scoring over 250 points.

11) After you win on the Davenport level and unlock the fourth level, Urbandale, answer these questions while reflecting on your work.
   - (Q5) In the game you just finished, how much does each brick weigh? _____
   - (Q6) In the game you just finished, how much would a cart weigh that had 0 bricks in it? _____
   - (Q7) What does the slope of your movable line represent in this game? Explain.

   - (Q8) What does the *y*-intercept of your movable line represent in this game? Explain.

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

12) Play the fourth level, Urbandale

- You should now be able to handle anything you come across on the fourth level, Urbandale. Give it a try!

13) After you win on the Urbandale level

- Did you earn a score of 250 points? Congratulations!!
- (Q9) Suppose you were asked to help out a friend who hadn't yet played how to win this game on the fourth level. Explain below, as if he or she were just starting it on his/her own computer.

- (Q10) If the number of bricks doubles from one cart to the next, would the total weight of the cart double also? Explain why or why not. Give an example from your data if you can.

14) Ask your teacher if you should continue on to the fifth level, Waterloo.