

Braking Distance

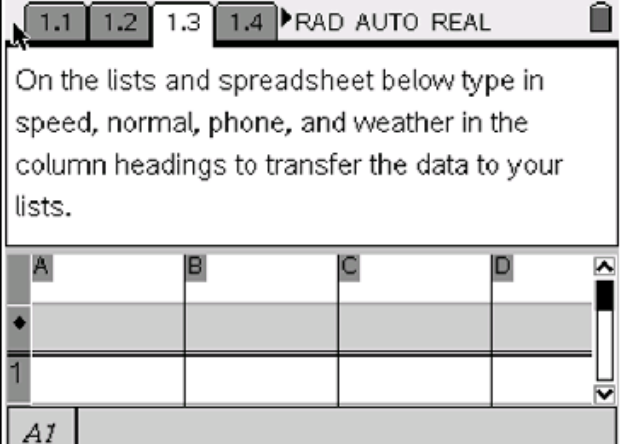
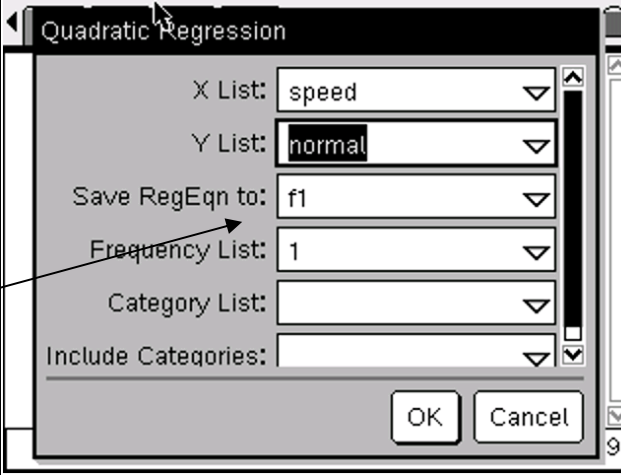
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Algebra I or Algebra II

Listed in your document you will find data that shows the number of meters it takes to stop a vehicle at a given speed under various conditions. Those conditions are stated as follows:

- Normal driving conditions
- Driving while using a cell phone
- Driving in wet weather

The overall stopping distance given to you takes into consideration both thinking time and braking time. The data was collected from a simulator provided by www.ask.com/stoppingdistances.

<p>In column A type in speed, in column B normal, in column C phone and in column D weather. Your data will be transferred into the lists for you.</p>	
<p>Find the model of best fit for your data. You should check your correlation values for the models we have discussed in class; linear, quadratic, and exponential. Once you have chosen the best model make sure you note what function it has been stored in. Notice that the example to the right has been stored in f1.</p>	

Record your equations below and round all values to the nearest thousandths position.

1.

2.

3.

4. What type of function best modeled each graph?

Speed vs normal _____

Speed vs cell phone _____

Speed vs wet weather _____

5. Use your equations to find the distance it would take to stop when traveling 55, 65, and 75 mph. List in the table below.

Speed	Normal Conditions	Using a Cell Phone	Wet Weather
55			
65			
75			

6. On pages 2.2 through 2.4 you will find data which factors into avoiding a pedestrian while driving and the subsequent injury consequences to that pedestrian. Write compound inequalities describing what could happen to a pedestrian hit at different speeds based on the driving conditions.

Conditions	Possibly Injured	Seriously Injured	Killed
Normal			
Cell Phone			
Wet Weather			

7. Looking at the data presented in this document what have you discovered about driving conditions and speed? Write your findings in paragraph form.