

Alg Stats 2.2c

How Long to Stop

Have you ever wondered why there are so many fender-bender accidents, especially the ones where one car hits the back of another?

- **How much distance do cars need for stopping at different speeds?**
- **Do different kinds of cars stop faster than others?**

1) Examine and organize the data below to help you answer the questions. You might use any or all of the following: stem and leaf plots, box plots, histograms, measures of central tendency, quartiles etc.

You may also use calculators.

Braking Distance in Feet

Large Sedan			Small Sedan		
Car #	30 MPH	60 MPH	Car #	30 MPH	60 MPH
1	52	138	1	68	154
2	60	137	2	66	147
3	54	133	3	57	148
4	70	161	4	65	155
5	53	130	5	63	147
6	61	135	6	68	146
7	80	139	7	67	154
8	55	137	8	67	125
9	76	168	9	58	145
10	64	160	10	65	151

2) Use the space below for your data organization, plots etc. Be certain to label well. If you need extra space, use extra paper. After you organize the data and create plots, respond to the following questions. Use your plots to help in your response.

- Which models have the shortest stopping distances at different speeds?
- What conclusions can you draw from the data about overall stopping distances? Be certain to talk about the kind of car you might buy, how fast you'll drive and how much distance you'll keep between your car and the car in front of you in different situations.