

AP Statistics McDonald's Case Assignment

What you are about to read is based on a true legal case.

Facts of the Case: A man we will call Mr. Smith who weighs 420 pounds walks into a Boston area McDonalds and orders a Happy Meal. He takes it to a table and sits down on one of the plastic-molded seats. It cannot hold his weight and collapses. Mr. Smith is only injured slightly as his hand hit the table while he was going down and it was bruised. He claims that the experience was quite painful and embarrassing and is now scared to sit on seats.

Mr. Smith sues McDonald's Corporation for \$1 million for pain and suffering. He claims McDonalds is to blame for having the faulty seat in its restaurant.

Basic Statistics of the Case: The average adult male in the United States weighs 185 pounds and the standard deviation is 31 pounds. As in most measurements of this kind, you can assume that male height is distributed normally. Although Mr. Smith has a medical problem that makes him weigh as much as he does, the judge in the case has ruled that the reason for Mr. Smith's girth has no bearing on the case. The company that manufactures the seat says that the average load that its seat can handle before it collapses is 450 pounds with a standard deviation of 8 pounds. Again, it makes sense to assume normal distribution.

Who is to blame here, if anyone?

Assignment: You are to become either the prosecuting attorney for Mr. Smith of the defense attorney for McDonalds. You are to write a one page maximum closing argument to the jury in this case (with all mathematical work on a separate sheet of paper).

- If you are the prosecuting attorney, your claim is that McDonalds is liable for Mr. Smith's pain and suffering and that they should pay Mr. Smith (do not argue about whether the sum of \$1 million is appropriate).
- If you are the defense attorney, your claim is that McDonalds has no liability in this matter and the case should be dismissed.

In your argument, some mention of statistics must be present. A graph or chart may be included if you wish (in addition to the one written page). When talking to a jury, do not assume that they have much technical knowledge of statistics.

You will be graded on the arguments you use, how clear your arguments are, and the statistical work and its accuracy.