

## Numbers Always Tell the Truth

Read the following selection and complete the assignment for the next class.

FACT—75 percent of households surveyed use Kleensuds!

FACT—This week, the use of Kleensuds in households surveyed increased by 300 percent.

At first glance, this seems to be a glowing account of the increasing popularity of a new laundry detergent called Kleensuds. Any market economist would be thrilled with these statistics, and these figures would certainly have an impact on consumers looking for better products. Are the statistics real? They are 100 percent arithmetically accurate. Are they valid? Well, that's a different story.

As you went to get your mail recently, you were greeted by a product representative promoting a new laundry detergent called Kleensuds. His name was Jim Change and, after a cheery hello, he promised to give you a large box of Kleensuds free if you would only answer one question and keep one promise.

The question was simple: What is the name of the laundry detergent you used when you last washed your clothes?

The promise was uncomplicated: in exchange for a free box of Kleensuds, you promised to use it for one week and see if you liked the product. Jim said that he would be back in a few days to ask a question.

Jim did the same routine with 99 other households that day and gave away 100 large boxes of Kleensuds. He recorded the answer to his question and realized that 25 out of 100 households were currently using Kleensuds.

At the end of the week, Jim went back to the same 100 households and asked the same question. What is the name of the detergent you used when you last washed your clothes? He then thanked the people for their time and effort and hoped that they enjoyed using the product. He recorded their responses and found that 75 out of 100 households washed their last load of clothes in Kleensuds. So . . .

FACT—75 percent of households surveyed use Kleensuds!

FACT—This week, the use of Kleensuds in households surveyed increased by 300 percent.

What is the lesson to be learned from this story?

FACT—Statistics are only as valid as the means to determine them! If the methods used to gather the data are invalid, as in the case above, then the statistics are also invalid.

Be skeptical. Do not permit people to use statistics on you unless you examine the criteria used to determine them.

Assignment—Watch five commercials this evening and record every piece of statistical information spoken or seen on the television screen. Examine each statistic and try to discover any problems which may have developed during the testing process that could have influenced the statistic itself. Be prepared to share your findings.