

Stat 345 - Handout 1
BASED ON SECTION: INTRODUCTION

Populations and Samples

- ex 1** Research engineers with the University of Kentucky Transportation Research Program have collected data on accidents occurring at intersections in Lexington, Kentucky, over a period of 5 years. One of the goals of the study was to compare the average number of left-turn accidents at locations with and without left-turn-only lanes, in order to develop guidelines for the installation of left-turn lanes.
- ex 2** Researchers have developed a new pre-cooling method for preparing vegetables for the market. The system employs an air and water mixture designed to yield effective cooling with a much lower water flow than conventional hydrocooling. In an effort to compare the effectiveness of the two cooling systems, 20 batches of green tomatoes were divided into two groups; one group was pre-cooled with the new method, and the other with the conventional method. The total water flow (in gallons) required to effectively cool each batch was recorded.

Descriptive Statistics

- ex 3** The FDA sets limits for DDT content in fish at 5 parts per million (ppm). Fish with DDT content exceeding this limit are considered potentially hazardous if consumed. In the summer of 1980 the U.S. Army Corps of Engineers collected fish specimens at different locations along the Tennessee River downstream from an inactive manufacturing plant to determine if discharged toxic material contaminated the fish. 144 fish were captured and the DDT concentration (in ppm) was measured in each fish. A histogram of the data is given on the next page.
- The mean is 24.35 ppm. The standard deviation is 98.38.