

# Graphics

# Why are we studying graphics?

- ▶ Good graphics today requires the computer
- ▶ Visualization enters every step of the data analysis cycle
  - ▶ Data cleaning are there anomalies?
  - ▶ Exploration
  - ▶ Model checking
  - ▶ Reporting results
- ▶ Plots can uncover structure in data that cant be detected with numerical summaries
- ▶ Important communication skill

## Kaiser study

```
load(url("http://www.stat.berkeley.edu/  
users/nolan/data/babiesLab133.rda"))
```

- ▶ Oakland Kaiser mothers
- ▶ 1960s
- ▶ Measure the babies weight (in ounces) at birth
- ▶ All babies: Male
- ▶ Single births (no twins, etc.) Survived 28 days

# Exploratory Data Analysis

```
class(3.5)

## [1] "numeric"

class("Hello there")

## [1] "character"

class(TRUE)

## [1] "logical"
```

- ▶ Another important type is factor