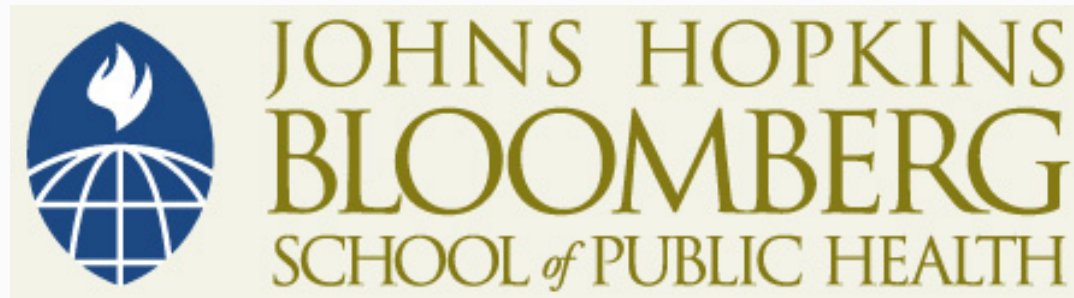


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JOHNS HOPKINS
BLOOMBERG
SCHOOL *of* PUBLIC HEALTH

Lecture 2c: Practice Problems

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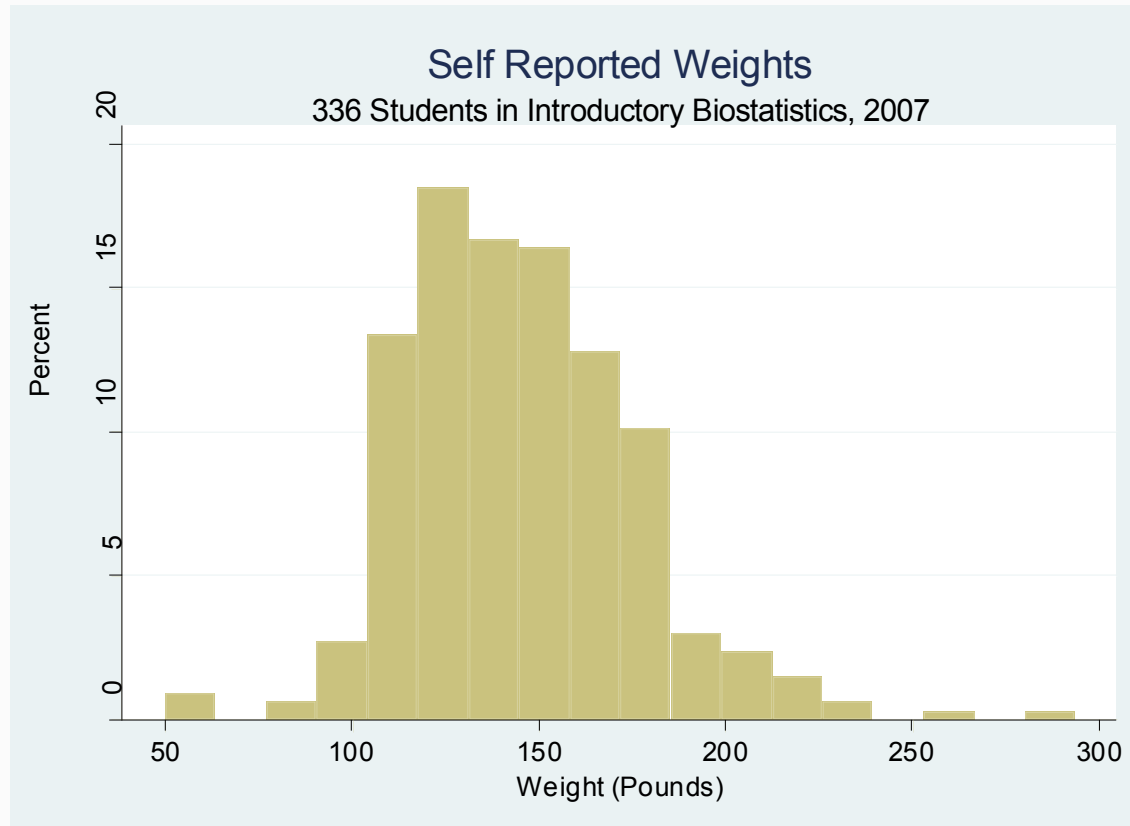
Practice Problems

1. The following boxplot shows the distribution of self-reported weights (in pounds) of 336 students enrolled in an introductory biostatistics course at JHBSPH in year 2007
 - Mean: 145 lbs; median 141 lbs; SD 31 lbs



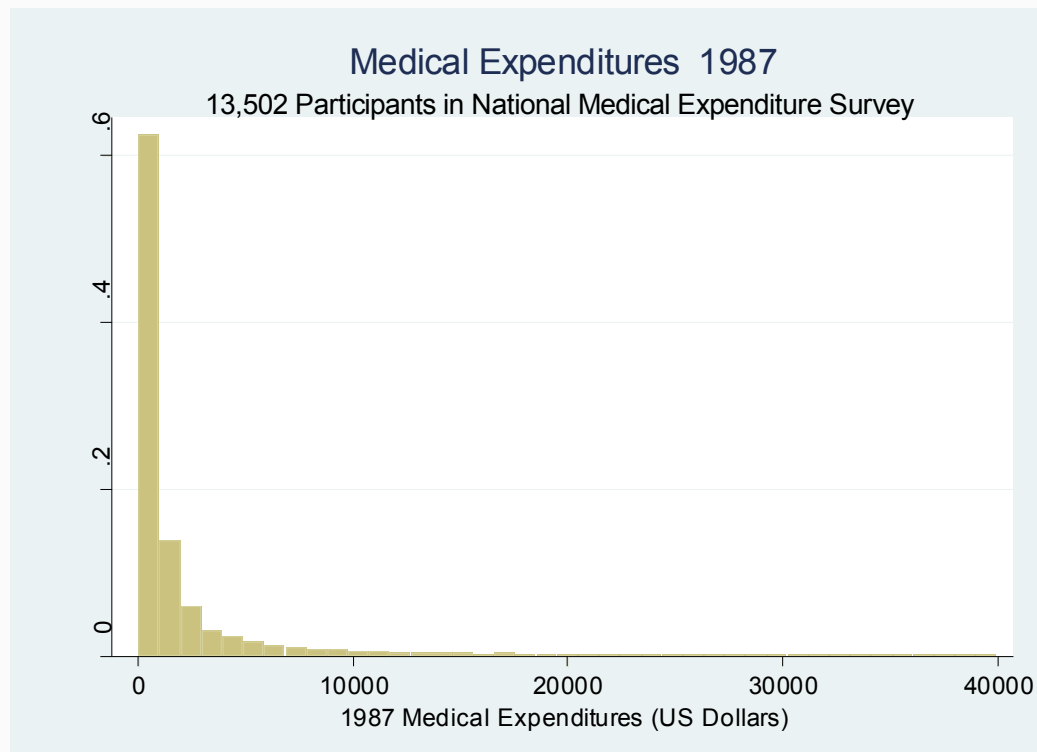
Practice Problems

- Here is the same data displayed in a histogram.
 - The 2.5th percentile is 97 lbs, the 97.5th percentile is 220 lbs. Applying the formula $\bar{x} \pm 2 \times s$ gives a range of 85 lbs to 205 lbs.



Practice Problems

2. The following histogram shows the distribution of medical expenditures (in U.S. dollars in the year 1987) for participants in the National Medicare Expenditures Survey (NMES)
- Mean \$2,300; median \$588; SD \$4,957
 - 2.5th percentile: \$10; 97.5th percentile \$18,430
 - Applying the formula $\bar{x} \pm 2 \times s$ gives a range of \$-7,714 to \$12,214



Practice Problems

3. The following histogram shows the temperature measured at 12 noon on everyday of a fifteen year period for the U.S. city of Philadelphia (5,471 days)
- Mean 54; median 55; SD 18
 - 2.5th percentile 20; 97.5th percentile 81
 - Applying the formula $\bar{x} \pm 2 \times s$ gives a range of 18 to 90

