Unit 2: Descriptive Statistics

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Definition

- To summarize data, statisticians often use a graph called a *histogram*.
- The histogram is a bar graph with height determined by the proportion of the population.
- It tells what the distribution of the graph is in terms of the variable that is studied.
- In a histogram the area of the blocks represent percentages.

Example

This is a bar graph representing the "frequency"
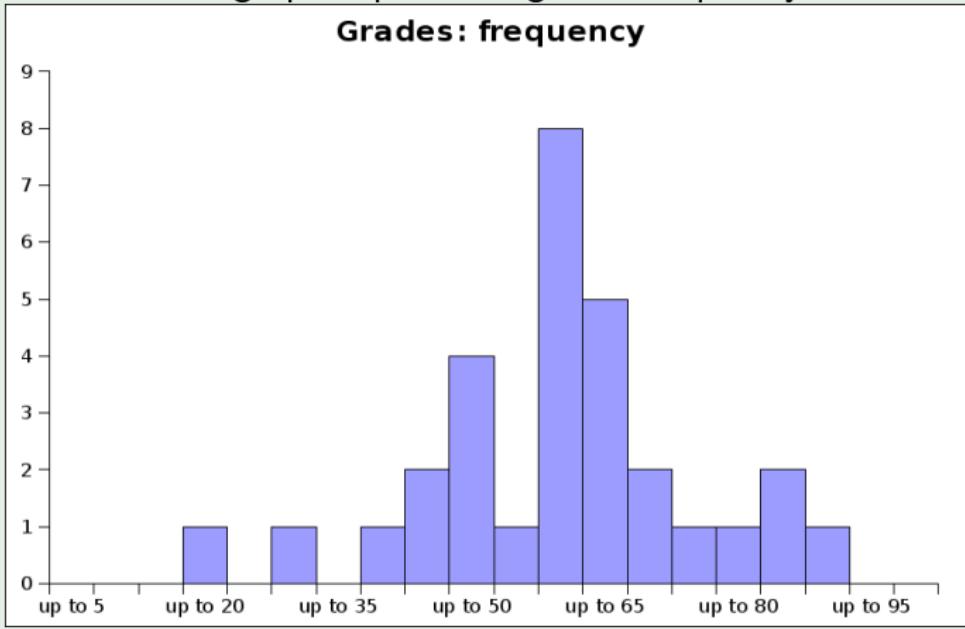
Grades: bins of width 10
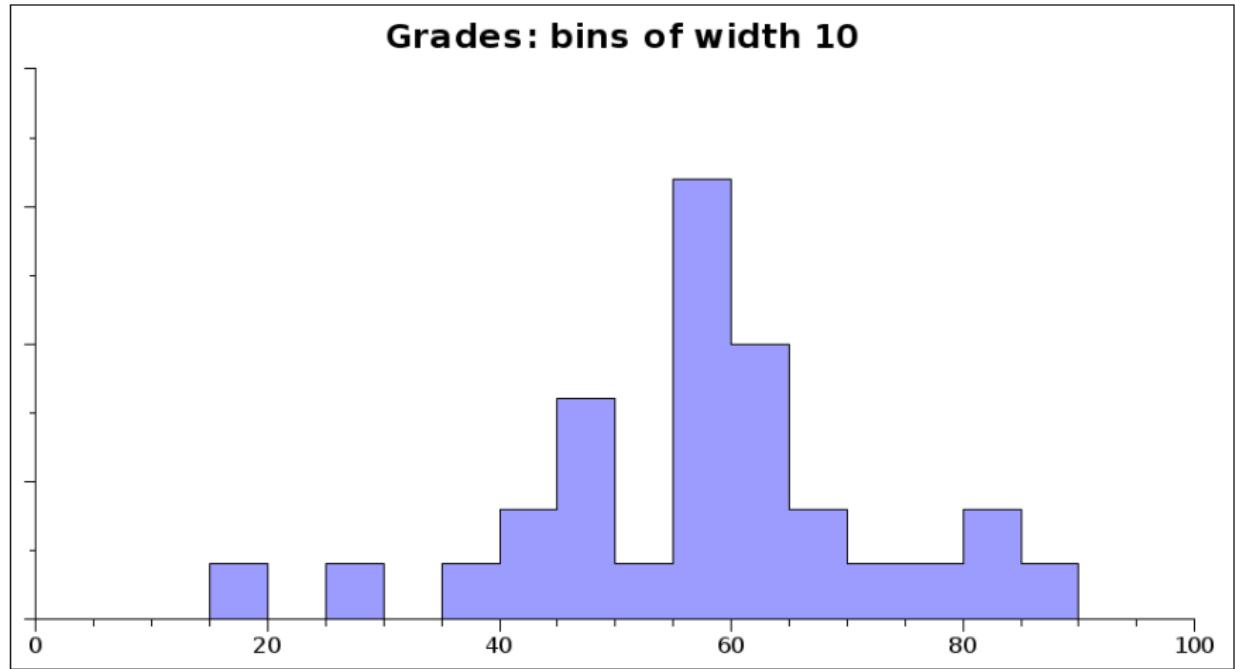
Correction: bins have width 5!

Grades: bins of width 20
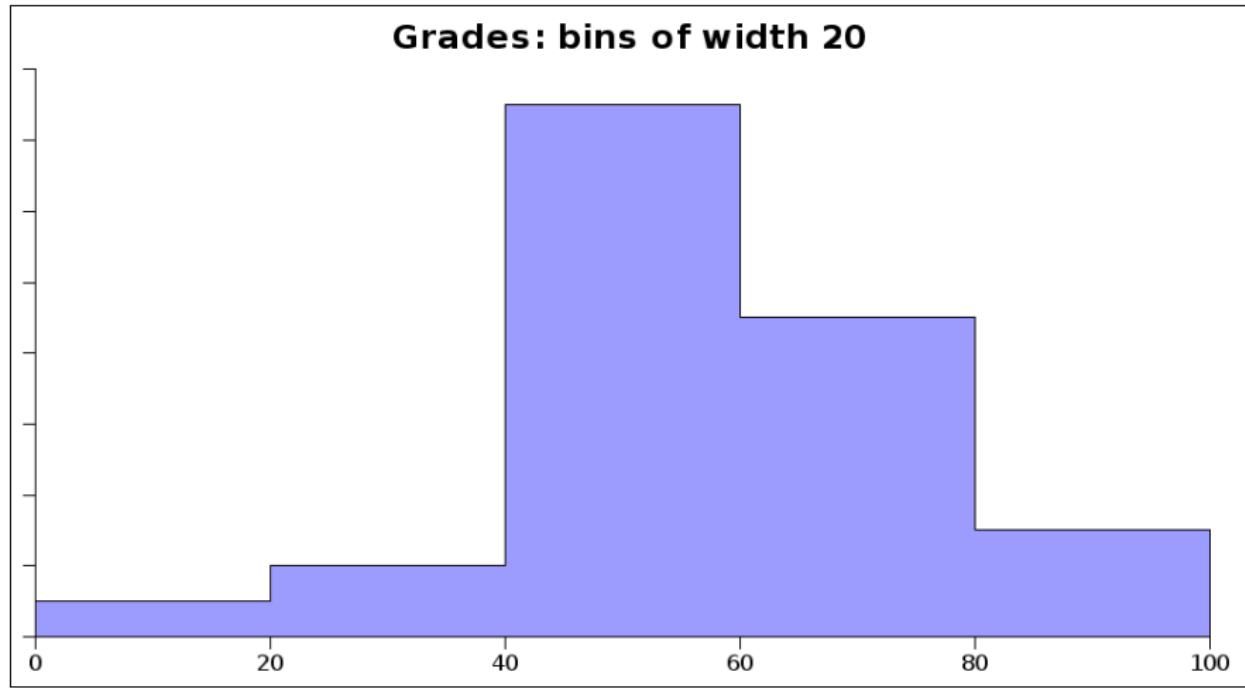
Determining the grade: bins of variable width

Grades: binds of different width
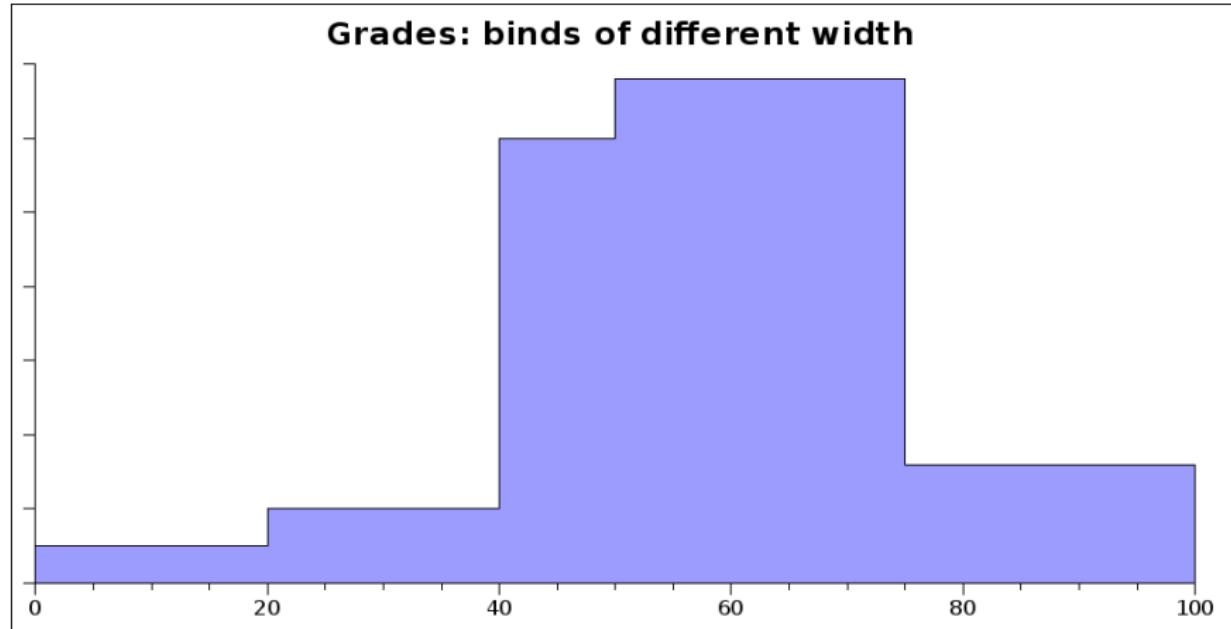
Income distribution (in thousand dollars) - 2008

<$15	$15-24.9	$25-34.9	$35-49.9	$50-74.9	$75-$99.9	$100
8.1	9.0	9.7	13.6	19.4	14.3	26.0

Income distribution 2008
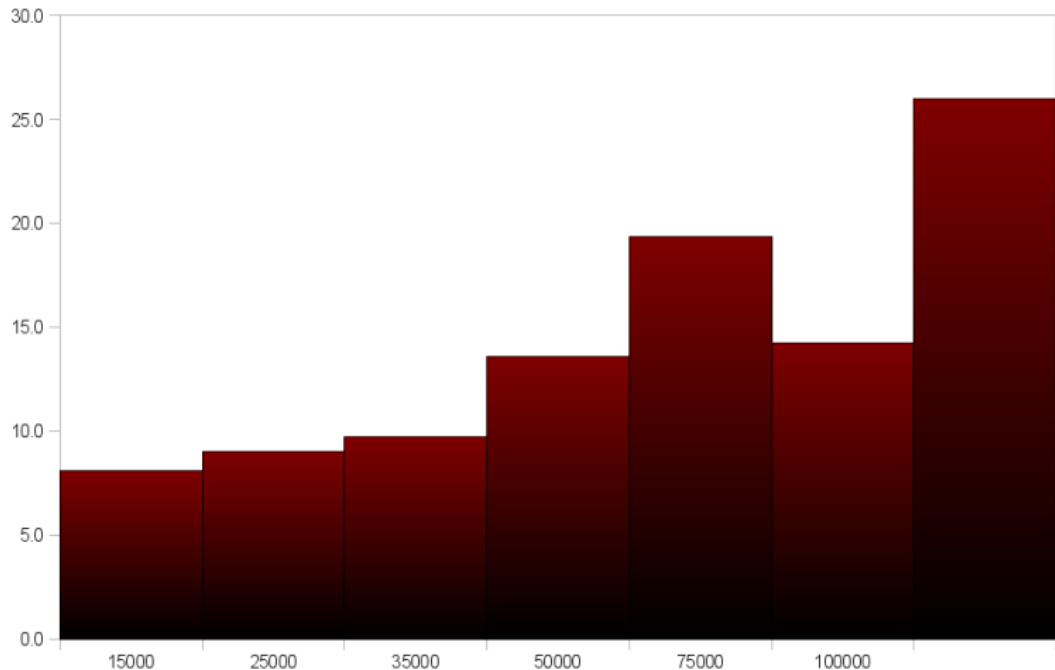
The correct histogram for income distribution
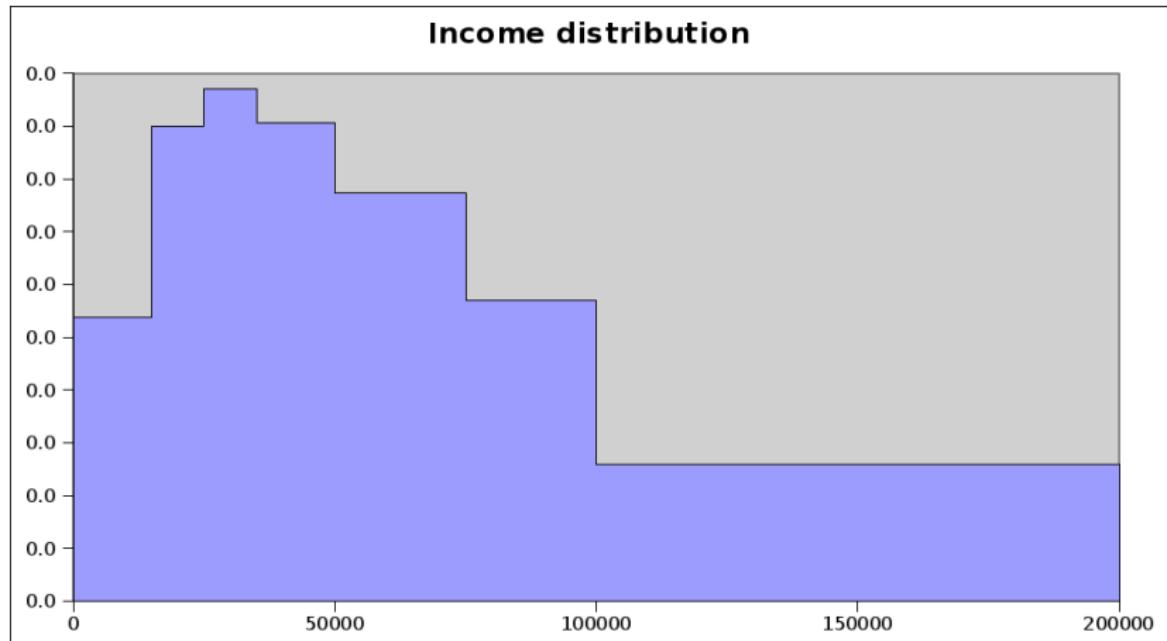
The Density Scale

Fact

- In a histogram the area of the blocks represent percentages.
- In a histogram, the height of a block represents crowding - percentage per horizontal unit.

Example

Which graph has higher blood pressure?