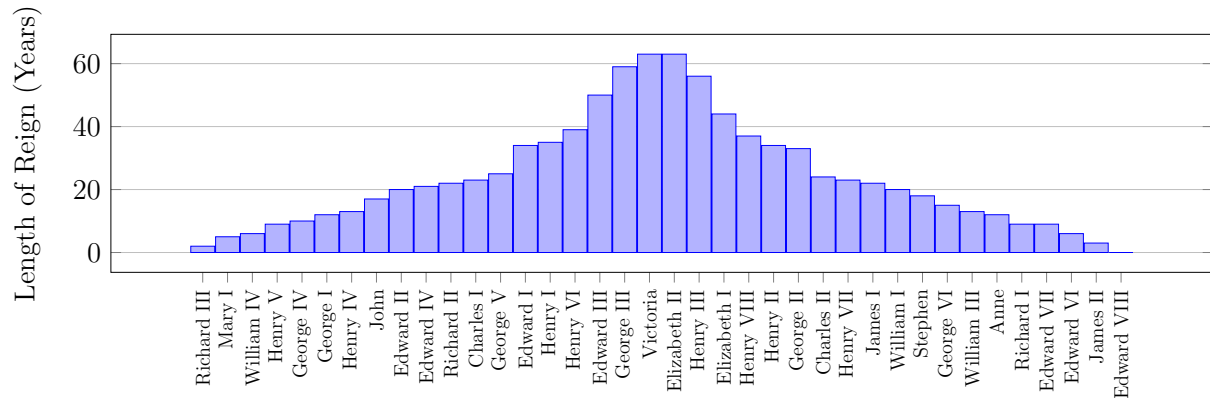


## Displaying Quantitative Variables

## Math 111

We will use four types of graphs to display quantitative variables: dot-plots, stem-and-leaf plots (stem-plots), box-and-whisker plots (box-plots), and histograms.

1. The chart below shows the length of reigns for British monarchs.



Explain why this chart is not a histogram.

2. Here are the lengths of the reigns (in years) of the monarchs from the chart above, sorted from least to greatest.

0, 2, 3, 5, 6, 6, 9, 9, 9, 10, 12, 12, 13, 13, 15, 17, 18, 20, 20, 21, 22, 22, 23, 23, 24, 25, 33, 34, 34, 35, 37, 39, 44, 50, 56, 59, 63, 63

- (a) Make a stem-plot for this data.
- (b) Make a dot-plot and a histogram for this data.
- (c) Make a box-plot for this data.

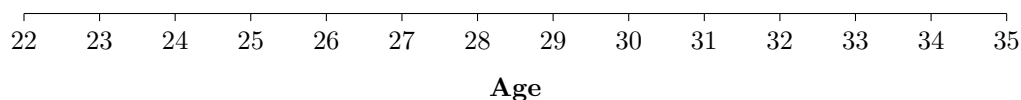
*On Aug. 30, 2006, the New York Yankees played against the Detroit Tigers. They were the top rated teams in the American League. Everyone expected that the Yankees would do well, but the Tigers were a surprise. One commentator speculated that the Yankee's success was due to youth, but the Tiger's success was due to experience.*

	Yankees		Tigers	
Position	Name	Age	Name	Age
C	Posada	35	I. Rodriguez	34
1B	Wilson	29	Casey	32
2B	Cano	23	Perez	33
3B	A. Rodriguez	31	Inge	29
SS	Jeter	32	Guillen	30
LF	Cabrera	22	Monroe	29
CF	Damon	32	Granderson	25
RF	Abreu	32	Gomez	28
DH	Giambi	35	Young	32
P	Wang	26	Robertson	28

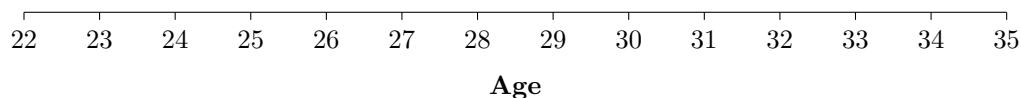
3. For each team find the five number summary of the team's ages.

4. On the axis below, make a box-and-whiskers plot of the ages for both teams.

Yankees



Tigers



5. Does the five-number summary and the box-and-whisker plot support the commentator's speculation about age and experience?