
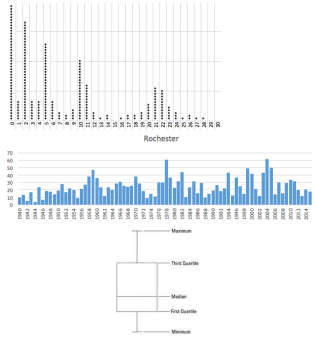
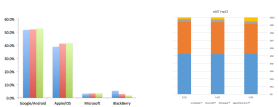
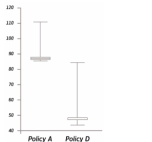


## Tool: Data Summary and Visualizations Guide

### Visualization and Analysis

#### Instructions:

Use the table below to decide which summaries and graphs are appropriate and useful when summarizing and visualizing different types of variables.

Randomness			
Variable type	Summary type(s)	Visualization(s)	
Categorical	<ul style="list-style-type: none"> <li>frequency table</li> <li>relative frequency table</li> <li>proportion</li> </ul>	bar chart pie chart	
Quantitative	<ul style="list-style-type: none"> <li>mean</li> <li>median</li> <li>max</li> <li>standard deviation</li> <li>range</li> <li>IQR</li> <li>five number summary</li> </ul>	dot plot histogram box and whisker plot	
Categorical vs. Categorical	<ul style="list-style-type: none"> <li>two-way table</li> <li>difference in proportions</li> </ul>	side-by-side bar chart stacked bar chart	
Categorical vs. Quantitative	<ul style="list-style-type: none"> <li>statistics by group</li> <li>difference in means</li> </ul>	side-by-side box and whisker plots	
Quantitative vs. Quantitative	<ul style="list-style-type: none"> <li>correlation</li> </ul>	scatterplot	