

A Guide to Bar, Line, & Pie Charts

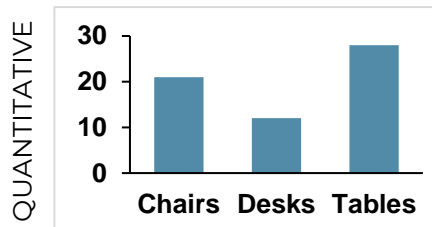
Data Types

- QUANTITATIVE:** numeric, can be measured, examples include 200 items, 6 miles, 24%
- CATEGORICAL:** category or group of items, not numeric, do not have a natural order, for example chairs, tables, desks *or* cats, dogs, horses
- ORDINAL:** have a natural order, such as months, quarters, years

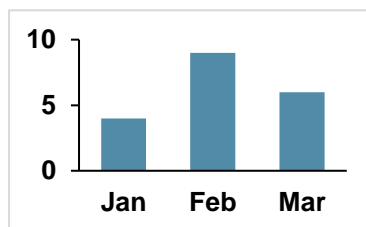
Bar Charts

Emphasize Volume, Size

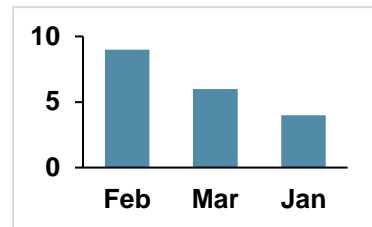
Compare values to each other, using the height of the bars
Both Categorical and Ordinal variables can be sorted or ranked



CATEGORICAL



ORDINAL

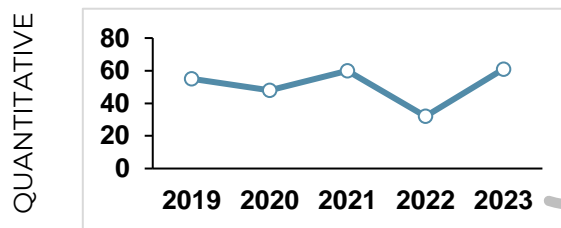


ORDINAL treated as CATEGORICAL and ranked

Line Charts

Emphasize Direction

Show movement of values over time
One axis is Quantitative and the other axis is Ordinal



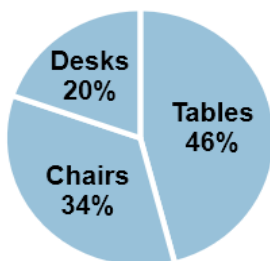
ORDINAL

Ordinal axis is always shown in its natural order and not otherwise sorted or ranked

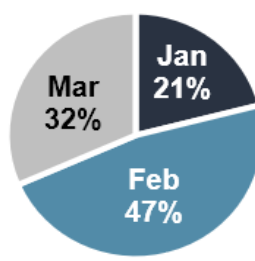
Pie Charts

Emphasize Percent of Total

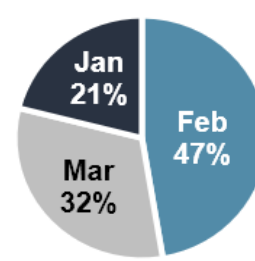
Compare values in relation to the whole; values always sum to 100%
Quantitative values are displayed as percentages of the circle (slices of the pie)
Both Categorical and Ordinal variables can be sorted or ranked



CATEGORICAL



ORDINAL



ORDINAL treated as CATEGORICAL and ranked