

Checklist for Good Graphs and Charts

Axes

- Are both axes labeled?
- Are the axis labels self-explanatory and concise?
- Are the scale and divisions shown on both axes?
- Are the min and max ranges appropriate?
- Are the units indicated?

Lines/Curves/Points

- Is the number of lines/curves reasonably small?
- Are any lines/curves labeled?
- Are all symbols clearly distinguishable (color *and* shape)?
- Is there a concise, clear legend?
- Does the legend obscure any data?

Information

- If the y-axis is variable, is an indication of spread (error bars) shown?
- Are grid lines required to read data (if not, then remove)?

Scale

- Are units increasing left to right (x-axis) and bottom to top (y-axis)?
- Do all charts use the same scale?
- Are the scales contiguous?
- Is the order of bars in a bar chart?
- Are any bars of appropriate width and spacing?

Overall

- Does the whole chart add information to reader?
- Are there no curves/symbols/text that can be removed and still have the same information?
- Does the chart have a title or caption (not both)?
- Is the chart self-explanatory and concise?
- Do the variables plotted give more information than alternatives?
- Is the chart referenced and discussed in any accompanying report?

Reference

Based on Box 10.1 from: Raj Jain. *The Art of Computer Systems Performance Analysis*, Wiley-Interscience, New York, NY, April 1991, ISBN: 0471503361.