

# GRAPH CHOICE CHART

Does your question ask you...

about the **variability** of a group of data points? (i.e. the range of the data, the shape of the distribution, or what the center of the data is)

1. Do all high tides rise to the same height?
2. How variable are wind speeds in Denmark?
3. What is the range and distribution of incomes in Sudan?

to **compare two or more groups** to decide if the groups are the same or different?

if **two numeric factors are correlated?**

1. Is the temperature inside the house correlated with the temperature outside?
2. How did electricity used by the kitchen circuit fluctuate during the past week?

how a **total is proportioned** into sub-groups? (Or what proportion a sub-group is of a total?)

1. What were Brazil's most significant exports in 2015?
2. What proportion of global electricity production comes from wind?
3. How do Parisians typically commute to work?

Frequency Plot

MAKE EITHER

Do you want to compare the **variability of all data points** in each group to decide if any difference between the groups is meaningful?

FOR EACH GROUP MAKE A

1. Which of the two solar cars consistently goes the farthest?
2. Is there a meaningful difference in the heights of fertilized and unfertilized bean plants?

Are you comparing **single numbers** that summarize a group? (such as mean, median, or total...)

1. Was the total snowfall greater this winter than last winter?
2. Do cats and dogs have the same average body temperature?
3. How do the median incomes for the US and India compare?

Does it ask about how something changes through **linear TIME**?

N

1. Is the fuel efficiency of a car related to its weight?
2. Are smoking rates correlated with median income?
3. Given a fixed volume, how are temperature and pressure related?

Y

1. Is sea level rising?
2. How did my weight change over the last 3 months?

MAKE EITHER

