

Warm up:



1. What percent of responders eat ice cream? $\frac{131}{220} \approx 60\%$

2. What percent of responders age 10-18 don't eat ice cream? $\frac{22}{108} \approx 20\%$

	Eats Ice Cream	Doesn't Eat Ice Cream	Total
Age 10-18	86	22	108
Age 19-29	45	67	112
Total	131	89	220

Objective: SWBAT create and describe graphs of numerical data.

Agenda:

- Warm Up
- Notes
- Practice
- Reflection

SOCS

Notes: Features

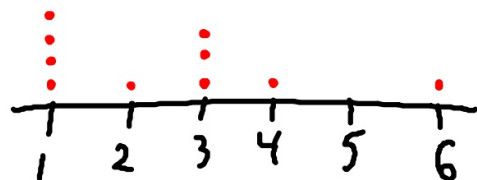
When describing a graph, be sure to mention:

hand motion	what it is	stat terms
Center	The middle of the graph	median, mean
Shape	where peaks and tails are	mode, skew, symmetric
Spread	variability; how clumped or spread out	range, interquartile range (IQR), standard deviation
Outliers	points away from the main group	outliers

Notes: Dotplot

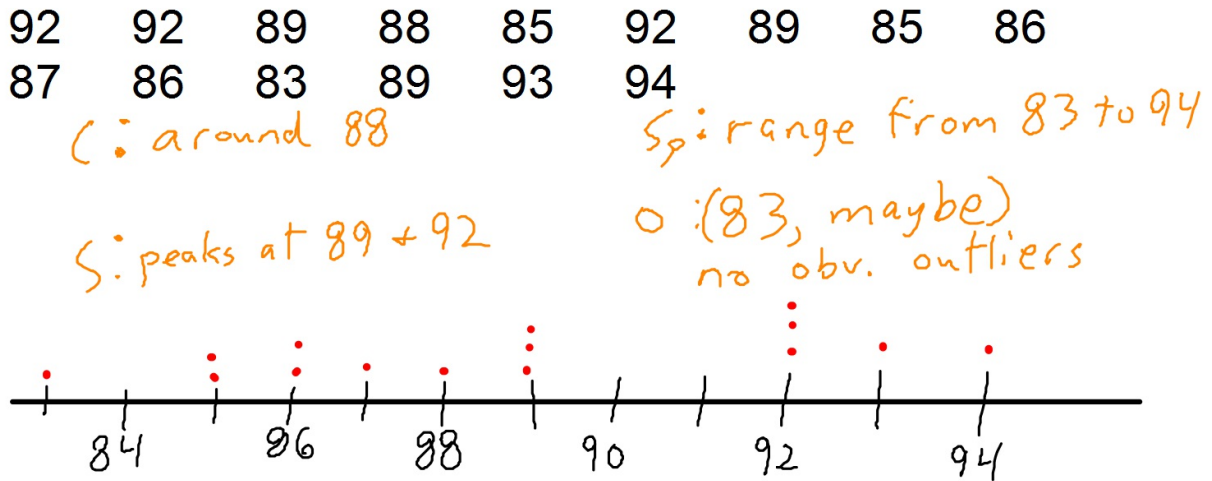
The horizontal axis is a number line, and the vertical axis is a count.

Each data value is marked as a dot above its place on the number line.



Example

Create a dotplot for the daily high temperature for the past two weeks:



Notes: Stemplots

Stemplots are similar to leaf plots in that they show the number of times a certain value appears. When making a stemplot, always include a key for the reader.

$$\begin{array}{r|l} 1 & 1 \ 1 \ 2 \ 8 \\ 2 & 0 \ 0 \ 1 \ 1 \ 2 \\ 3 & 0 \ 3 \ 6 \end{array} \quad 1|0 = 10$$

Variations: split stemplot--the lower half of a set of leaves comes off one stem; the upper half comes off the next stem

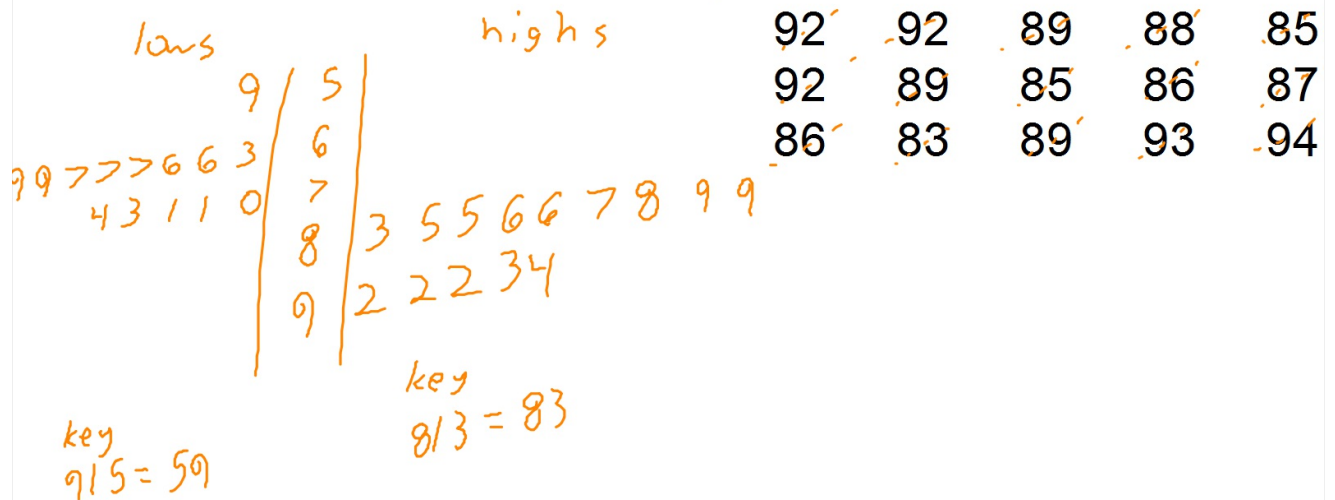
back-to-back stemplot

Example

Make and describe a back-to-back stemplot from this data and the numbers from your dotplot. Compare the plots for the high and low temperatures.

Aug 2015 lows

74 73 71 70 71 69 69 67 66 63 59 67 67 66 69



Notes: Histograms

Histograms look very much like bar graphs, with some differences:

- histograms are used for numerical variables
- The horizontal axis is marked in units of measurement for the variable
- the height of a bar represents the frequency (absolute or relative) of data values within a certain range
- bar graphs have spaces between the bars; histograms do not

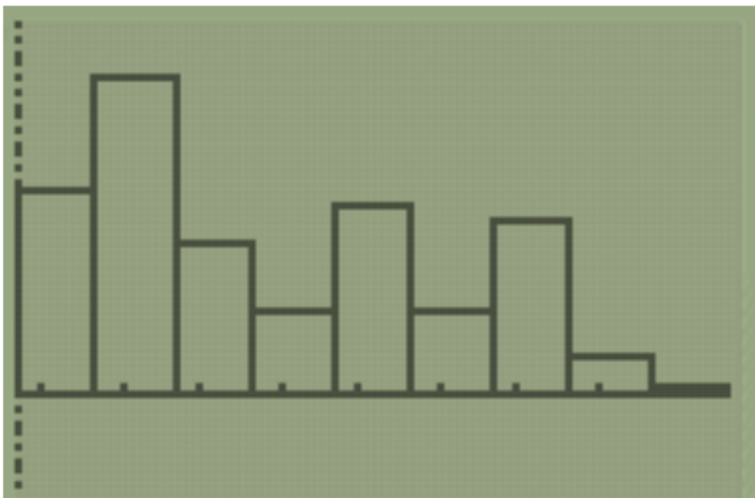
Using Histograms

Keep the width of the bars uniform.

- Don't use counts or percents as data.
They go along the vertical axis, not the horizontal one.
- If you're comparing two data sets of different sizes, use percentages instead of absolute counts.

Example

pg. 40: fix Billy's graph



Practice

Use the data in our Google class to create a graph to summarize it. Describe the graph using complete sentences and the vocabulary from the reading section. Justify your choice of graph.

Reflection

What kinds of things can be represented with numerical data?

HW: pg. 42 #38-56 even