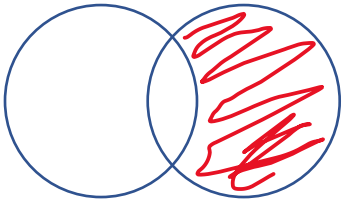
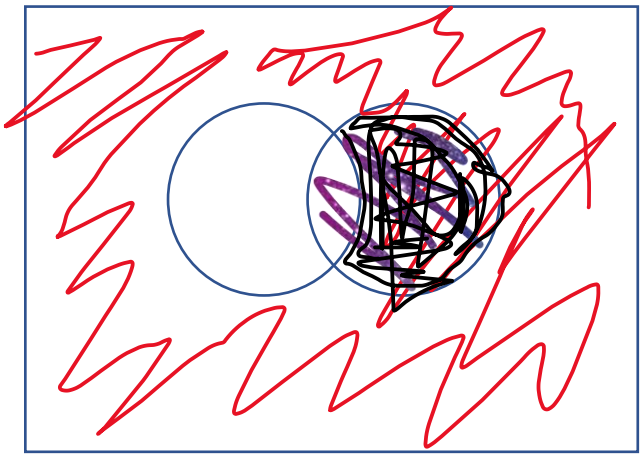
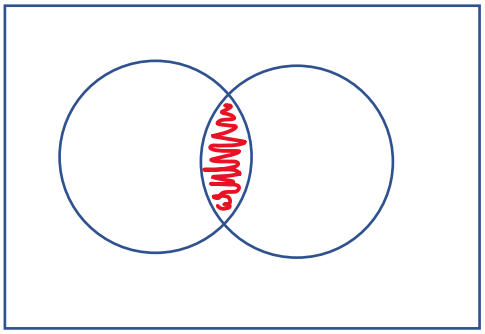
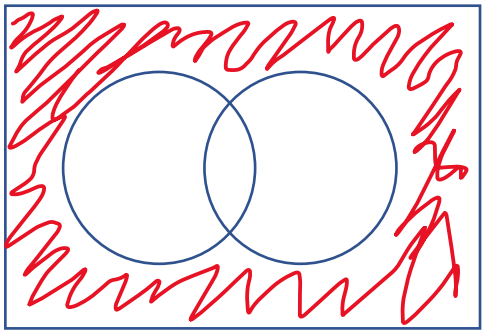
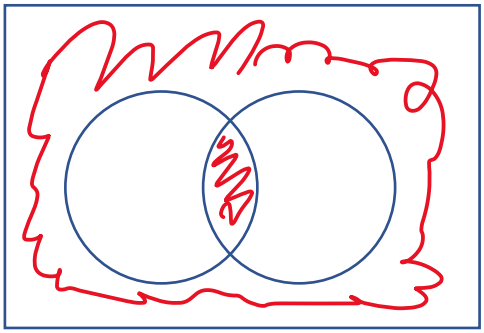
2/2/2021











Homework #1 and Project #1 – due Thursday

Proportions: Ratio of two numbers. The larger number is always on the bottom. That means proportions are always between 0 and 1. No negative. Not bigger than 1.

Fractions, Decimals, Percentages, Scientific Notation.

Fractions are like proportions "in the raw": they are the ratio of 2 numbers: $\frac{31}{72}$

Decimals: Literally divide the denominator into the numerator by adding 0s to make the division possible. $\frac{31}{72} = 0.43055555\ldots$

Percentages are "per cent": multiply the decimal value by 100 to obtain the percent.

Scientific notation usually is used for very large or very small numbers: calculator only converts to scientific notation for large numbers when they don't fit on the screen anymore. Small numbers like 0.0001 display in scientific notation in calculator.

0.0001 = 1.0×10^{-4} in calculator/Excel = 1.0E-04
\$1,900,000,000,000. = 1.9×10^{12} in calculator/Excel = 1.9E12

Don't write the E notation on paper for your answers!

10^{12}

In Excel: see example file

Percent change

$$Percent\ change = \frac{New - Old}{Old} = \frac{New}{Old} - 1$$

See Excel

Percentiles: A percentile is a way of saying what percent of the data (population) is less than or equal to a given value in data.

Range of scores on the SAT is 200 – 800, aim for a mean of 500 (variability- standard deviation of 100). Suppose you get 600 on the math test: roughly this is around 84th percentile: 84% of people who take the test score at 600 or lower. 700 is roughly the 97th percentile: around 97% of people score at or below 700.

See Excel

Summarizing data in tables

See Excel