

MATH

with
Bad Drawings

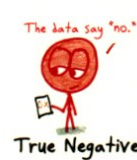
1. How would you call these four categories of experimental results?

Every science experiment asks a question. No matter the question, there are two possible truths ("yes" and "no") and, given the inherent unreliability of evidence, two possible outcomes ("you get it right" and "you get it wrong"). Thus, experimental results can fall into four categories.

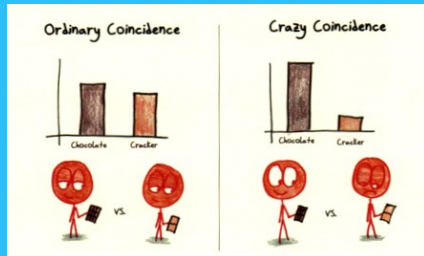
To label the following examples, combine the terms:

positive – negative – true – false

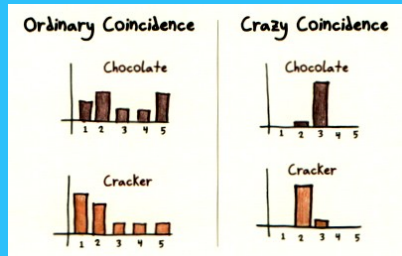
Question: Are there ghosts?



2. Look at the following drawings: what are the three fundamental factors the p-value incorporates to avoid flukes and random chance?



The size of the difference

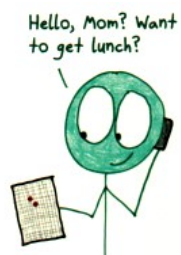


The variance within each group

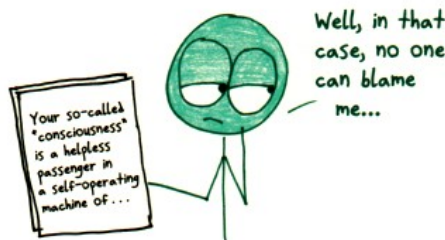


How big the data set is

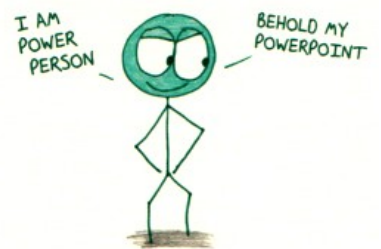
3. Can you guess what the scientific studies and their questionable conclusions were?



After plotting two close-together points on graph paper, you feel emotionally closer to your family members than after plotting two far-apart points.



You're more likely to cheat on a test after reading a passage that argues there's no such thing as free will.



Adopting certain "power poses" can inhibit stress hormones while boosting testosterone, prompting others to judge you as more confident and impressive.