1. Define/Describe Proof

Proof is something which we present to “prove” the validity of our argument or standpoint. It can come in two forms, evidence and reasoning.

1. Describe three types of evidence and how evidence can be most powerful.
   1. Evidence comes in three forms; direct experience, dramatic experience, and rationally processed.
   2. Direct experience is evidence that you have experienced first-hand. Like deciding to ride a shopping cart off the roof of your house, when you crash into the ground and break your arm you will know that it hurts and doing so was a bad idea.
   3. Vicarious experience is experience that is gained through others. If my mother did the same above action and told me how she spent a month with an itchy cast around her arm, then she might tell me, and I would learn not to do the above task without direct experience.
   4. Rationally processed evidence plays on some argument and logically plays to the argument.
   5. Evidence is so powerful because it plays on our nature to avoid things that cause pain and move toward enjoyable things for direct experience, additionally it plays on our social nature in the case of dramatic experience, rationally processed evidence also plays on our capability to use logic.
2. Define seven types of reasoning and give an example of each.
   1. **Effect-to-cause:** cite some effect and then identify it’s cause. I hear some crash in my kitchen, I go and see a plate of chicken I was thawing out on the floor and my dog is eating it, I found the effect (the plate of chicken on the floor) and deduce the cause (my dog being bad).
   2. **Cause-to-Effect:** Notice some cause and then identify it’s effect. My dog was hungry so my dog will eat the chicken I left on a plate.
   3. **Reasoning from Symptoms:** Someone identifies some symptoms and tries to deduce their cause. If I am sniffly, sluggish, feverish, and coughing then I must have the flu or be sick.
   4. **Criteria-to-application:** We will generate internal criteria to some situation. If I want to go out to eat, it would have to be sufficiently balanced between cheep and good. Something like McDonald’s is cheap but not very good, however Eddie Merlot’s may be good but is too expensive. So I settle with Agaves which is a decent balance between the two.
   5. **Reasoning from Analogy:** A person may use an analogy to describe or draw comparisons to some concept or idea. My search for good and cheap food is like Moses’ search for the homeland that God had granted the Jewish fleeing Egypt. It took a long time.
   6. **Deductive:** Deductive reasoning goes from general to specific information. If I hear a crash in my kitchen, I can use the context of the chicken on the plate and my hungry dog to deduce that my dog is currently eating that chicken.
   7. **Inductive:** Inductive reasoning goes from specific to general information. I tell my wife that the dog is currently eating the chicken I put on the plate in the kitchen and then tell her how I know.
3. Give an example of how stats and testimony have been misused in a news story from the past month.
   1. <https://www.jdsupra.com/legalnews/lies-damn-lies-and-statistics-how-the-99459/>
   2. Jonathan Ettinger wrote the above article. He describes how data has been misrepresented regarding Covid-19 Infections. In particular who has been getting infected. People are mixing up total infections versus the percentages of the population infected. Around 15% of people infected could be in there 50s, but what percentage of the population that are in their 50s are infected? So, we can’t say that there is a 15% chance for people in their fifties to get infected and we can’t say that all age groups have the same chance of getting infected. This isn’t a blatant misuse, but most-likely a misunderstanding of the stats.
4. Define and give examples of the most logical fallacies
   1. Ad Hominem is an attack on the person and not the weaknesses of the argument. It would be like if I called someone ugly when they brought up a point that directly contradicts my argument.
   2. Post Hoc, Ergo Propter Hoc is a fallacy in which a false link is connected between an event that precedes another. If lightning struck someplace near my house and the power went out, I could assume that the lightning caused it, but it could have just been a strong wind that knocked over a powerline.
   3. Ad Populum is an argument that adheres or plays to the popular side of an argument. If someone argues for free healthcare the other person may ask people whether they want higher taxes for healthcare and use that as a basis for dismantling the opponents argument.
   4. The Undistributed Middle states that there is no middle ground in some argument. In terms of abortion, someone could claim that everyone who wants abortion to be legal are trying to kill healthy babies. Although, they don’t consider those who believe abortions should be legal in cases where the baby and mother could die in labor or where the baby may not live very long after birth.
   5. The Straw Man is a fallacy where someone might misrepresent an argument or standpoint in an attempt to weaken it. If someone was arguing for free healthcare, someone else may say “So, you want us all to pay for other people’s mistakes?”
5. Compare logical syllogisms and the Toulmin Model, which is more effective for analyzing or developing persuasive messages and why?
   1. Syllogisms are three-part statements consisting of a major and minor premise and a conclusion.
   2. Toulmin lacks premises but includes a claim, or an idea to be supported by evidence or data. This is followed by Data that supports the idea, the Warrant then links the data and the claim. Sometimes followed by Backing or information that establishes the validity of the arguments reasoning and links data with the claim.
   3. While functionally beautiful, the syllogism seems less organic. I don’t think people would use them frequently, since most people are quick to describe their claim and provide evidence. Additionally, the Toulmin model includes the options that people have at each stage of the model providing functionality.