My George is my 15 year old step-brother Zach. He is in 9th grade and is in honors math and English, therefore he thinks that he is incredibly smart given that he is taking honors courses, which I didn’t explain to him that is an invalid argument and just because you are in honors classes doesn’t mean that you are automatically smart. Him thinking that he was a genius because he was in honors classes is what made me suspect him to be a George. To further my studies of him, I gave him a simple test to evaluate his “georgeness”.

I began by providing the argument, if all bobcats are animals and all pets are animals, does this mean that all bobcats are pets? I then asked him if this was a valid form of an argument and he exclaimed, “No!” without much thought. After that I asked him if any argument with a true conclusion is a valid argument. He said, “makes sense to me”. He was wrong. To follow, I asked him the opposite, and does every invalid argument have a false conclusion? He caught on and disputed this question. Similarly, I asked, that if a conclusion becomes false, is the argument invalid. His brain appeared to be spinning too fast for him and said sure. He wasn’t prepared at all for this last question, it read,” If you have false premises, can you even have a conclusion at all?” again, he said “makes sense”. In summary, the only misconception he believed to be true was that every invalid argument has a false conclusion. I tried to teach him the difference between correct reasoning and drawing a correct conclusion.

I am no logic teacher, but I still attempted to teach him some logical thinking. I started by explaining that validity of an argument and the truth of a conclusion are two very different things. I did this by talking about the example, “If all bobcats are animals, all pets are animals, then all bobcats are pets”, example. The form is invalid, but that just means that the true conclusion doesn’t come 100% of
the time. I wasn’t a good teacher which lead to him not asking any good questions. After chipping away at his misconceptions with textbook facts and practice problems he started to understand. On the one homework problem, “John has lost consistently at black jack every day this week. He must win today.” My step brother is familiar with the gambler’s fallacy so he started to understand that it is invalid to think that John would have to win today. I told him that even if John won, the argument would still be invalid because John is guaranteed anything whilst gambling. My student thought he learned everything there is to know about logic and he was ready to go play video games when I told him that there is a follow up questioning, he grunted and sat back down.

This session I just wrote down each misconception down as a question and made him write down the answers. All of his answers were the same as the first testing, so I am either a poor logic teacher or he is destined to be a George. I just went through the misconceptions and explained them without tricks and told him how valid arguments don’t need true conclusions because validity isn’t dependent on the outcome of a certain situation. Also, the misconception that every argument with a true conclusion is valid is false because in a situation, something comes out true doesn’t mean that it will come out true every other time you repeat the situation. Finally, the misconception that no conclusion follows correctly from false premises is horribly wrong because, you can have false premises for any type of conclusion (false or true) to follow. For example, All wood is purple and all trees are purple, therefore all wood is tree. This is a true conclusion that came from false premises. After laying the definitions on the table, my George understood why the misconceptions aren’t true. He centralized his understanding around the gambler’s fallacy, which is okay I think.

In the final analysis of my George, I don’t think he really understands the difference between correct reasoning and drawing a correct conclusion because he got the same scores on the tests. I am to blame because I was not a very good logic teacher and I had to read straight out of the text book for him to start to understand in validity of arguments and conclusions. This activity made me realize that I was
still a George in ways because I further understood why the misconceptions were false. This activity helped me more than it helped my George, and for that I thank my logic teacher, Leah Savion.