Name _____ **KEY** _____

Instructions: Answer each question completely. Show all work for any computational questions.

1. In taking a measurement, how does bias differ from validity?

   bias in measurement may make a result differ systematically from the true value. Validity does not actually measure what is claimed to be measured.

2. Why are rates considered to be a more valid measurement than a count?

   they can be extrapolated to the population whereas a count cannot be.

3. What does it mean for a measurement to be reliable?

   a measurement is precise and valid.

4. Why should we consider whether our numbers are plausible before doing any statistics?

   we may catch errors (implausible results may indicate problems w/ bias, reliability and/or validity)

5. Give an example of a way to spot fake data.

   values are cited which can't be obtained from sample size or patterns in # selection don't match real world numbers (which start w/ more one's than random #'s)

6. Two polls are published from two different pollsters. One is conducted by a state political party, and the other is conducted by an independent local polling firm. The numbers presented by the two polls differ by more than 10% for a question on a particular topic. Whose poll is more likely to valid and why?

   the independent polling firm's Their reputation is based on their accuracy of predictions so the incentive is for that. a political party's incentives may lead them to ask leading question that make their party look better.