1. Identify the population, parameter, sample, and statistic for the scenario provided.

The state of California is interested in learning about the average income level of students enrolled in its public schools. California randomly selects 100,000 students to complete the survey, and 21,000 are returned, with the reported average income being $65,000.

2. Determine whether the given variables are categorical or quantitative. For any quantitative variable, also name the unit in which it was measured, if given.

People who get lost in the desert, mountains, or woods often seem to wander in circles rather than walk in straight lines. To see whether people naturally walk in circles in the absence of visual clues, researcher Andrea Axtell tested 32 people on a football field. One at a time, they stood at the corner of one goal line, were blindfolded, and then tried to walk to the other goal line. She recorded each individual's sex, height, handedness, the number of yards each was able to walk before going out of bounds, and whether each wandered off course to the left or to the right. No one made it all the way to the far end of the field without crossing one of the sidelines.

3. Sketch distributions that meet the following requirements:

a. Skewed right with high outlier

b. Approximately symmetric and unimodal

c. Skewed left with a gap

d. Distribution for which the median is less than the mean. (This is also a distribution for which median/range are better measures of center/spread than mean/standard deviation.)

e. Distribution for which the median and the mean are equal. (This is also a distribution for which mean and standard deviation are reliable measures of center and spread.)

4. Using the datasets provided, provide a quick sketch of the distributions. Then, in writing, describe the distributions.

a.

40	39	37	35
40	39	37	35
40	39	37	34
40	38	37	34
40	38	36	33
39	38	36	32
39	38	36	26

b.

52	54	55	57
53	54	55	57
53	54	56	57
53	55	56	57
53	55	56	58
54	55	56	58
54	55	56	52

5. A large urban unified school district is selecting an intervention program to pilot in select schools. They want to choose the program with which they will see the largest gain in achievement scores. The curriculum and instruction committee of UUSD hears pitches from two curriculum companies. Company A's pitch features a student whose achievement scores have improved by 300 points. Company B's pitch features a student whose achievement scores have improved by 30 points. Both companies also supply small datasets from recent pilot tests. Compare the programs. Which curriculum should UUSD choose? Why?

   Company A: -4, -3, 0, 3, 4, 5, 11, 13, 15, 300

   Company B: 8, 10, 12, 16, 18, 20, 21, 24, 26, 30

6. Feedback: Any feedback on today's class? What would you like to change/improve? Anything I should stop doing or continue doing? Other concerns?