Statistical Reasoning   Name _____

Population vs. Statistics Book Problems

p. 222 #5.28, 5.29, 5.30; p. 235 #5.47, 5.48

*Each boldface number in Exercises 5.28-5.30 & 5.47-5.48 is the value of either a **parameter** or a **statistic**. In each case, state which it is. Identify the population and/or the parameter in each scenario as well.*

5.28:

Drink Arizona On Tuesday, the bottles of Arizona iced tea filled in a plant were supposed to contain an average of **20** ounces of iced tea. Quality control inspectors sampled 50 bottles at random from the day's production. These bottles contained an average of **19.6** ounces of iced tea.

Population: Sample(s):

Parameter: Statistics(s):

5.29:

Flight Safety On a New York-to-Denver flight, **8%** of the 125 passengers were selected for random security screening prior to boarding. According to the Transportation Security Administration, **10%** of airline passengers are chosen for random screening.

Population: Sample(s):

Parameter: Statistics(s):

5.30:

Sleeping Ducks, I A recent report in the journal *Nature* examined whether ducks keep an eye out for predators while they sleep. The researchers, from Indiana State University, put four ducks in each of four plastic boxes, which were arranged in a row. Ducks in the two end boxes slept with one eye open **31.8%** of the time, compared with only **12.4%** of the time for the ducks in the two center boxes.

Population: Sample(s):

Parameter: Statistics(s):

5.47:

Lefties According to "Real Facts" at Snapple.com, **13%** of adults are left-handed. At a math teacher's conference, **16%** of those attending were left-handed.

Population: Sample(s):

Parameter: Statistics(s):

5.48:

Single-sex classes In an experiment to test the effectiveness of single-sex classrooms, girls assigned at random to a coeducational chemistry class gained an average of **12.2** points from a pretest to a posttest. Girls assigned randomly to a single-sex chemistry class taught by the same teacher gained **15.1** points.

Population: Sample(s):

Parameter: Statistics(s):