Week 2 — Study design, bias, and causality: Monday exit ticket

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Name: _____ **Date:** _____

Instructions

Work through each item below. Write your final response in the space provided. Show enough work that another reader can follow your reasoning.

1. For each of the two short study descriptions below, decide whether the study is observational or experimental, and write one short sentence explaining how you can tell.

   (a) A nurse manager pulls discharge records for every patient admitted to her ward in the past year and computes the average length of stay for patients who received a particular IV antibiotic compared with patients who received a different antibiotic.

   (b) Researchers enroll 200 adult patients with chronic back pain, randomly assign half to receive a 6-week yoga program and the other half to continue their usual care, and measure pain scores at the end of 6 weeks.

2. For each of the two short scenarios, identify which number is a sample statistic and which number is a claimed population parameter.

   (a) American households spent an average of about $52 on Halloween merchandise (costumes, candy, decorations) in 2007. To see if that number had changed, researchers conducted a new survey in 2008 of 1,500 households and found that average Halloween spending in those 1,500 households was $58.

   (b) The average GPA of students at a private university in 2001 was 3.37. A survey of 203 students at the same university ten years later found an average GPA of 3.59.