Statistical Reasoning Name:

95% Confidence Intervals Practice

1) A random sample of 200 computer chips is obtained from one factory and 4% are found to be defective. Construct and interpret a 95% confidence interval for the proportion of all computer chips from that factory that are defective. Round all percentages to the nearest tenth.

2) Out of 54 randomly selected patients of a local hospital who were surveyed, 49 reported that they were satisfied with the care they received. Construct and interpret a 95% confidence interval for the percentage of all patients satisfied with their care at the hospital. Round all decimals to the nearest tenth.

3) Wildlife biologists inspect 153 deer taken by hunters and find 32 of them carrying Lyme disease ticks.

a) Calculate a 95% confidence interval for the proportion of deer that carry Lyme disease ticks. Round all decimals to the nearest tenth.

b) If the scientists want to cut the margin of error in half, how many deer must they inspect?

4) EMC research conducted a poll between Jan. 14 and Jan 22 2014. They asked a SRS of 805 voting Seattlites if they supported the minimum raise hike to $15/hr. They found a sample proportion of 68%. What is the margin of error?