SEIS 631

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Assignment 6

**Q1) What does each case (observation) in this data represent? How many cases do we have?**

Each case is the data associated with a birth in North Carolina in 2004. We have 1000 cases.

**Q2) What mean weight do you get for smokers and non-smokers?**

Smokers: 6.82873 lbs

Non-Smokers: 7.144273 lbs

**Q3) Write the hypotheses for testing if the average weights of babies born to smoking and non-smoking mothers are different.**

H0: µsmoking = µNon-smoking

HA: µsmoking ≠ µNon-smoking

**Q4) What is the point estimate for this hypothesis test?**

Point estimate is 0.3155 lbs

**Q5) What is the p-value for this hypothesis test?**

p-value is 0.0184

**Q6) What Confidence Interval do you get?**

(0.0543, 0.5777)

**Q7) Interpret the Confidence Interval in words.**

Based on the data we are 95% confident that babies born to a non-smoker will weight 0.0543 lbs to 0.5777 lbs more than a baby born to a smoker.

**Q8) What Confidence Interval do you get?**

The confidence interval is now (-0.5777, -0.0534)