

Homework 3

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Problem 1

Let $n = 189$, \bar{X} (sample mean) = 129.81, s (sample standard deviation) = 30.58

- a) Because we do not know the true population variance σ^2 , 95% confidence interval of true mean weight can be obtained by the following:

$$\bar{X} - t_{n-1, 1-\alpha/2} \frac{s}{\sqrt{n}}, \bar{X} + t_{n-1, 1-\alpha/2} \frac{s}{\sqrt{n}}$$

Thus, 95% confidence interval is (125.43, 134.2)

- b)