

Week 4 – Homework and Quiz Review Problems and Notes

NOTE: In addition to these problems, please review the other notes for this week's lecture.

1. A consumer protection agency wants to study gas prices at gas stations in the state. It takes a sample of 50 gas stations. The sample mean is \$2.35 with a standard deviation of \$0.12. Construct a 99% confidence interval to estimate the population mean. (2.30,2.40)

Confidence Interval for μ

Confidence Level	99%
n	50
Mean	2.35
StDev	0.12
Use t or z?	
SE	0.016971
t-value	2.679952
Margin of Error	0.045480
Lower Limit	2.304520
Upper Limit	2.395480

2. A consumer protection agency wants to study gas prices at gas stations in the state. It takes a sample of 50 gas stations. The sample mean is \$2.35. The population standard deviation is known to be \$0.10. Construct a 99% confidence interval to estimate the population mean. (2.31,2.39)

Confidence Interval for μ

Confidence Level	99%
n	50
Mean	2.35
StDev	0.1
Use t or z?	
SE	0.014142
z-value	2.575829
Margin of Error	0.036428
Lower Limit	2.313572
Upper Limit	2.386428