

Answers for the exercise questions

- 90% CI

- Critical value = 1.64 (or 1.65)
- Standard error = $\sqrt{\frac{14}{81}} = 0.416$
- Margin of error = $(1.64)(0.416) = 0.682$
- 90% CI = $[48-0.682, 48+0.682] = [47.318, 48.682]$

- 99% CI

- Critical value = 2.57 (or 2.58)
- Standard error = $\sqrt{\frac{14}{81}} = 0.416$
- Margin of error = $(2.57)(0.416) = 1.069$
- 90% CI = $[48-1.069, 48+1.069] = [46.931, 49.069]$