

5. Find the critical value, Z_c , necessary to form a confidence interval at the given level of confidence.
- (a) $c = 0.80$
 - (b) $c = 0.85$
 - (c) $c = 0.97$
7. Construct the indicated confidence interval for the population mean μ . (round to two decimal places)
- (a) $c = 0.90$ $\bar{x} = 15.2$ $s = 2.0$ $n = 61$
 - (b) $c = 0.95$ $\bar{x} = 31.39$ $s = 0.8$ $n = 82$
8. A biologist reports, a confidence interval of (2.1, 3.5) when estimating the mean height (cm) of a sample of seedlings. Find the estimated margin of error and the sample mean.
9. You work for a consumer advocate agency and want to find the mean oil change cost. As part of your study, you randomly select 40 oil change costs and find the mean to be \$65.00. The sample standard deviation is \$10.50. Construct a 90% confidence interval for the population mean repair cost. (round to two decimal place)
10. **Internet Shopping** In a Gallop poll, 1025 randomly selected adults were surveyed and 29% of them said they used the Internet for shopping at least a few times a year. (round to three decimal place)
- a. Find the point estimate \hat{p} , of the percentage of adults who use the Internet for shopping.
 - b. Find a 99% confidence interval estimate of the percentage of adults who use the Internet for shopping.