

One frequently used test to measure the reading ability of children is the DRP, or Degree of Reading Power. It is known that the distribution of DRP scores is normally distributed. A researcher suspects that the mean score μ of all 500 third-graders in Henrico County Schools is different from the national mean, which is 32 points. To test her suspicion, she administers the DRP to a random sample of 22 Henrico County third-grade students. Their scores are recorded in the following table:

40	26	39	17	42	18	24	43	46	27	19
47	19	26	37	34	15	45	41	39	31	46

1. Find the t critical value for a 90% confidence interval for the true **mean**, μ , of the population.
2. State and verify the conditions for the confidence interval.
3. Compute the 90% confidence interval for the mean DRP score in Henrico County Schools. (You can find your point estimate and standard deviation in your calculator using the **1-Var Stats** function. Compare your answers with a classmate to make sure you entered things in correctly!)
4. Write a sentence of interpretation for the confidence interval you computed in the previous question.
5. Use the confidence interval you constructed in to comment on whether you agree with the researcher's suspicion. Explain your reasoning clearly.