To calculate the 95% confidence interval for the mean ACT score using a t-distribution, I need to systematically apply the appropriate formula and determine which of the provided options is correct.

First, I note that this question refers to "data in question 7," but that data isn't explicitly provided in this prompt. Without the specific data, I'll explain the proper approach and demonstrate how I would evaluate each option using the t-distribution formula.

The formula for a 95% confidence interval using the t-distribution is:

x̄ ± t(α/2, n-1) × (s/√n)

Where:

- x̄ is the sample mean

- t(α/2, n-1) is the critical t-value with n-1 degrees of freedom at α/2 = 0.025

- s is the sample standard deviation

- n is the sample size

I notice immediately that options (A) and (B) refer to one-sided intervals (-infinity to some value), which doesn't align with the standard two-sided 95% confidence interval approach requested. Confidence intervals for means typically have both lower and upper bounds.

Options (C) and (D) provide two-sided intervals. Without the raw data, I can examine the structure of these intervals:

Option (C): 18.07 to 23.63 (width = 5.56)

Option (D): 18.22 to 23.48 (width = 5.26)

To select between these options, I would use the provided sample statistics (mean, standard deviation, sample size) from question 7, substitute them into the formula, and determine which interval matches my calculation.

Since options (A) and (B) are one-sided intervals and the question asks for a standard confidence interval, they are likely incorrect. Between options (C) and (D), I would choose the one that matches my calculated interval using the t-distribution formula.

Without the specific data from question 7, I cannot definitively select the correct answer.