To calculate the Standard Error we also need to calculate s (standard deviation of the scores in the measure). We do this using the following equation:

\[ S = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n - 1}} \]

\( n = 4 \) (because we have four subjects in our example data set)

\( r = 0.94 \) (from Step 1, corrected r instead of estimated r used in Step 3)

\[ \sum (X_i-X)^2 = (85-78.8)^2 + (60-78.8)^2 + (75-78.8)^2 + (95-78.8)^2 \]
\[ = 38.44 + 353.44 + 14.59 + 262.44 \]
\[ = 668.91 \]

After plugging these #'s into the equation for s, we get:

\[ S = \sqrt{\frac{668.91}{3}} = 14.93 \]

We then plug s and r into our equation for Standard error and get:

\[ SEM = 14.93 \sqrt{1-0.89} = 14.93(0.33) = 4.94 \]

We are then asked to calculate the 95% confidence intervals for subject 1. To do this we use the following equations:

Upper Limit = Xi + 2*SEM

Lower Limit = Xi - 2*SEM

For subject 1, Xi = 85 and SEM = 4.94

We plug in the #'s and get:

Upper Limit = 85 + 2(4.94) = 94.88
Lower Limit = 85 - 2(4.94) = 75.12

You’re on your own for Step 5 and 6, but case 2 is full of hints for doing it correctly.