

### In-Class Correlation Calculations with Corrections

As you may recall, I checked our correlation calculations against the values generated by SPSS and got a large disparity. We obtained  $r = .3376$ , while SPSS generated an  $r = .339$  (significant at the .03 level).

I checked our calculations and found the mistake. Bellow are the corrected calculations for our data. Please go back over your own class notes and see if you can find the mistake and then check your calculations against what I present below.

$$r = \frac{\sum XY - \frac{(\sum x)(\sum y)}{N}}{\sqrt{\sum X^2 - \frac{(\sum x)^2}{N}} \sqrt{\sum Y^2 - \frac{(\sum y)^2}{N}}} = \frac{1002 - \frac{(65)(132)}{10}}{\sqrt{509 - \frac{(65)^2}{10}} \sqrt{2278 - \frac{(132)^2}{10}}} = \frac{1002 - \frac{8580}{10}}{\sqrt{509 - \frac{4225}{10}} \sqrt{2278 - \frac{17424}{10}}}$$
$$\frac{1002 - 858}{\sqrt{509 - 422.5} \sqrt{2278 - 1742.4}} = \frac{144}{\sqrt{86.5} \sqrt{535.6}} = \frac{144}{(9.3005)(23.1430)} = \frac{144}{215.2415} = .6690$$

*Final Answer*

$$r(8) = .67, p < .05.$$