

(Continued)

5. $df = 10$
6. ± 2.228
7. $p \text{ value} = .005 \text{ or } 0.5\%$
8. Because the t test statistic of -3.601 exceeded the critical value of ± 2.228 , we reject the null hypothesis.
9. Students performed better on the exam after completing their psychological statistics course than before taking this course. Thus, it appears students learned something from taking the class.
10.
$$d = \frac{-25.18}{23.194}$$

$d = 1.09$. This is a strong effect size. That is, the time at which the exam was taken was strongly predictive of performance on that test.
11. The 95% CI is -40.76 to -9.60 , meaning that 95% of the samples drawn from the same population would be between -40.76 and -9.60 . This interval does not contain 0, so we can be confident that students perform better on the exam after than before they take a class in psychological statistics.
12. Here is the proper write-up in APA style:

The paired samples t test revealed that students performed better on the exam after taking the class ($M = 71.18\%$, $SD = 15.92\%$) than before taking the class ($M = 46.00\%$, $SD = 16.90\%$), $t(10) = -3.601$, $p = .005$, $d = 1.09$, 95% CI $[-40.76, -9.60]$.