

9. Given your answer to the previous question, what does it mean in plain English?
10. By using Cohen's (1992) guidelines, interpret the effect size.
11. Interpret the 95% confidence interval.

## Answers

1.  $0.16 - (-0.23) = 0.39$
2. 1.99
3.  $1.99 = \frac{0.39}{\text{Standard error of the difference between the means}}$   
Standard error of the difference between the means = 0.196
4. 44.5
5. Yes, this assumption was violated because normally, for the independent samples  $t$  test, degrees of freedom are measured "sample size  $- 2$ ." Had that been the case, there would have been  $60 - 2 = 58$  degrees of freedom. This assumption was violated because we have only 44.5 degrees of freedom. We lost degrees of freedom because of this violation.
6. We cannot locate the precise degrees of freedom in this appendix, but we can locate critical values for 40 and 60 degrees of freedom. Our 44.5 degrees of freedom falls in between these two parameters, so let's use the critical value for 40 degrees of freedom (which is  $\pm 2.021$ ) and 60 degrees of freedom (which is  $\pm 2.000$ ). By using these two critical values, we can approximate our critical value to be about  $\pm 2.01$ .
7.  $p = .05$  (5% chance the mean difference was due to random variation).
8. The  $t$  test statistic of 1.99 falls just below the critical value of 2.01; therefore, we fail to reject the null hypothesis. (NOTE: The researchers said  $p = .05$ ; therefore,  $p$  was *not less than* .05, which it would need to be to reject the null hypothesis.)
9. Writing about one's death or writing about music did not affect college students' estimates of their overall financial worth 15 years into the future.
10.  $d = 0.54$  is a moderate effect size.
11. If we could draw an unlimited number of samples from this population, 95% of those samples would contain a mean difference between .00 and .77. Because it contains zero, we cannot be confident that there is a mean difference on this dependent variable in the population.