**Psy 230 Lab Assign. 5  
Hypothesis Testing: Making Decisions about  
Errors, Effect Size, & Power**

As part of her doctoral dissertation, Amy gives a questionnaire designed to measure depression to a sample of 10-year-old children whose parents were recently divorced. For the general population of 10-year-olds, scores on the questionnaire form a normal distribution with μ = 50 and σ =12. Higher scores indicate greater levels of depression. She assesses a small sample of children of divorced parents and obtains depression scores of 55, 79, 60, 66, 44, 62, 66, 51, and 39.

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(1) Conduct a hypothesis test with alpha = .05 to determine whether the 10-year-olds of divorced parents have significantly different levels of depression than 10-year-olds from the general population.

Ho:

H1:

Please list the critical value(s).

Compute the test statistic.



State your decision (Retain Ho or Reject Ho).

**(2) Now suppose the first score is 53 instead of 55; the rest of the data remains the same as above. Compute the test statistic and indicate your decision.**

What weakness/disadvantage of hypothesis testing does this comparison illustrate?

What would you suggest Amy do to make her sample results less susceptible to this weakness?

(3) Now suppose that Amy’s hypothesis is that children of divorced parents will be more depressed than the general population of kids. Please use the original set of data and use alpha=.05.

Ho:

H1:

Please list the critical value(s).

Compute the test statistic.



State your decision.

Discuss the advantages and disadvantages of using directional (one-tailed) versus nondirectional (two-tailed) tests.