

Single Sample t-tests

Assignment: Heiman Chapter 11

Terms you should know.

t-test

Single sample t-test

* Degrees of freedom

* Power

* Effect Size

* Practical Significance

Formulas and Symbols You Should Know.

t

* df

$$S_{\bar{X}} = \frac{s_x}{\sqrt{N}}$$

$$t = \frac{\bar{X} - \mu}{S_{\bar{X}}}$$

$$* \eta^2 = \frac{t^2}{t^2 + df}$$

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Concepts You Should Master

1. What is the difference between a t-test and a z-test? Under what conditions would you do each test?

2. How to use the t-tables.

3. What is meant by
 - a. Statistical significance?

 - b. Effect size?

 - c. Practical significance?

Homework #10: Calculations You Should Master

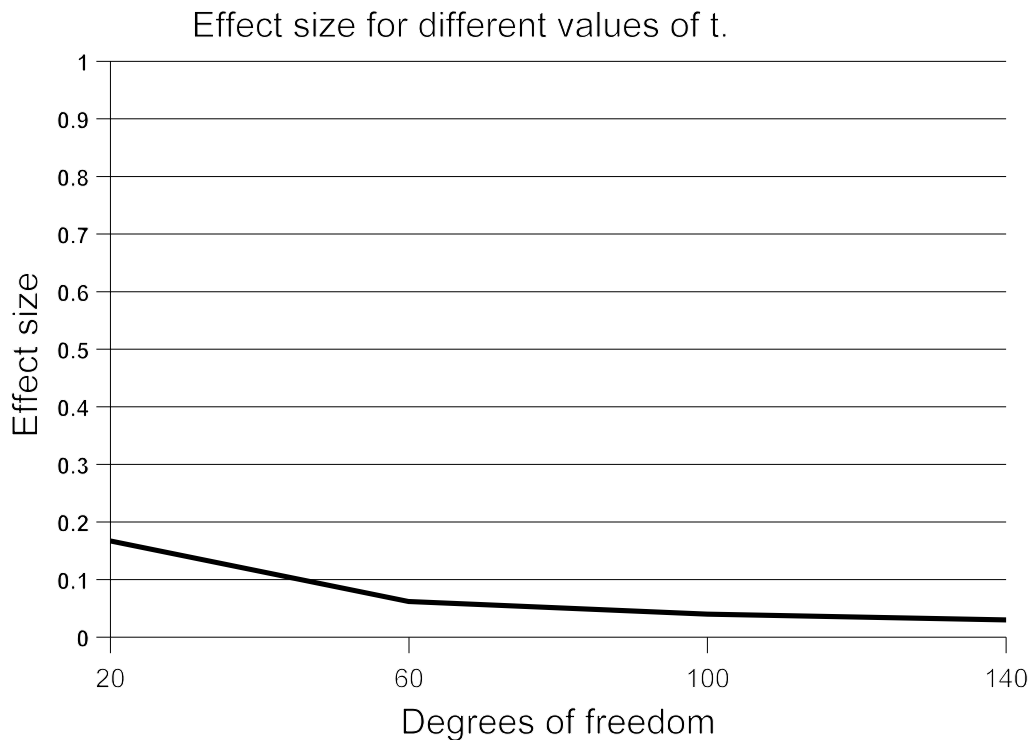
Name: _____ (This is my work, and my work alone.)

Problem 1. This problem is designed to demonstrate what happens to effect size as the sample size (power) increases.

First. Compute the effect size (η^2) for each of the following t values and fill in the values in this table. Some of the values have been filled in.

	Degrees of freedom			
t	20	60	100	140
2.00	.167	.062	.04	.03
3.00				
5.00				
10.00				

Second. Draw a line for each t value for each of the degrees of freedom. The line for $t=2$ has been shown. Be sure to label your lines!



1. What happens to the effect size as t increases?
2. What happens to the effect size as the sample size increases?

