8	A	3. Cohen's d

If the **mean** verbal SAT score is **510** for women and **490** for men, what is the **d** ?

d = _____

8	A	9. Extremely large t-value

The **t value** calculated for a particular two group experiment was **– 23**.

Which of the following can you conclude?

- ☐ a. A calculation error must have been made.
- ☐ b. The number of participants must have been large.
- ☐ c. The effect size must have been large.
- ☐ d. The expected t was probably large.
- ☐ e. The alpha level was probably large.

Explain your choice.

8	A	*10. Cohen's d

Suppose you are in a situation in which it is **more important to reduce Type II errors** than to worry about Type I errors.

Which of the following could be helpful in reducing Type II errors?

- ☐ a. Make alpha unusually large (e.g., .1).
- ☐ b. Use a larger number of participants.
- ☐ c. Try to increase the effect size.
- ☐ d. All of the above.
- ☐ e. None of the above.

Explain your choice.

8 B	6. Power & Sample Size

A **drug** for treating headaches has a side effect of lowering diastolic blood pressure **by 8 mmHg** compared to a **placebo**. If the **population standard deviation** is known to be **6** mmHg,

a.) What would be the **power** of an experiment (α = .**01, two**-tailed) comparing the drug to a placebo using **15 participants per** group?

power = _____

b.) How **many participants** would you need **per group** to attain **power = .95, with α = .01, two**-tailed?

n = _____

8 C	2. Power & Sample Size -- USE G*Power SOFTWARE --

~~Given the adjusted effect size from part a of the previous exercise,~~

I am changing this problem!

How many participants of each gender (assuming equal sample sizes) would be needed for power to be **.8**, with alpha = **.05, two**-tailed test?

For a small effect size (d = .2)

n = _____

For a medium effect size (d = .5)

n = _____

For a large effect size (d = .8)

n = _____