Highlight Notes Chapter 2

Research Methods in Cognition

1. Descriptive Research.

List and define three types of descriptive research. Provide examples of how each can be used within cognition. Why are these three types of methods limited in terms of studying cognition?

2. Experimental Research.

Define:

What happens in an experiment? Why is the computer so important? What are the advantages and disadvantages of experimental research?

3. Cognitive Ψ Experiments.

A. Dependent Variables: How we "see" thinking in action.

→ Identify the types of common DVs used in cognitive Ψ experiments.

→ Describe Donders' subtractive logic (p.41).

B. Independent Variables: What influences our cognitions?
→ List and describe four types of IVs and provide an example for each.

C. Confounding Variables
→ Define and provide a research example.

D. Assigning Participants to Conditions: Between or Within
→ Define each. Provide a research example that used a between subjects design, one that used a within subjects design, and one that used a mixed design (i.e., both within and between). When would you use a within vs. between subjects design?

4. Factorial Designs

What is the difference between a main effect and an interaction? How can you identify a main effect and/or an interaction in a table or graph of cognitive data?

5. Cognitive Neuroscience

A) Draw and correctly label all the components of a neuron. Draw and label the four major lobes of the brain.

B) Identify and describe the different types of tools that researchers use for cognitive neuroscience research.

Do all of the STOP and THINK exercises on pages 35, 36, 42, 45, 48, 55, and 63.
Do all of the STOP and REVIEW sections. Define all of the key terms on pages 69-71.

BONUS → Create a summary diagram/handout that illustrates the importance of research methods to cognition. <u>Due the day of the midterm.</u>