

Visual Search

All answers should be clearly identified (i.e. which question you are responding to) and must be typed. If you choose to do this lab, please hand in a paper copy on the day of the first exam, along with your other chosen lab assignment.

Section One

Please answer all of the following questions

1. Suppose that you decided to keep the number of distractors in this demonstration constant at 64. According to your understanding of visual search processes, predict what would be the easiest condition, the next most difficult condition, the next most difficult condition after that, and the most difficult condition ("difficult" refers to a longer reaction time). The conditions are: feature present, conjunctive present, feature absent, and conjunctive absent.
2. Does the data correspond with what you predicted in question one?
3. Use what you know about visual search to predict which of each pair would be easier to search for:
 - The letter O among Vs or the letter P among Rs and Qs
 - A lime among lemons and medium-sized dill pickles or a lemon among bananas
4. a) Using the attached group data, calculate the mean reaction time for each different number of distractors over all four conditions.
b) Using the data from (a), plot four lines - conjunctive absent, conjunctive present, feature absent, and feature present - making the reaction time a function of the number of distractors.
c) Does the data in (b) confirm the difference between conjunctive and feature searches?

Section Two

Please answer both questions.

3. What process might be at work to make feature searches fast (and not requiring attention) and conjunctive searches slow (and requiring attention)?
4. Explain why conjunctive absent searches should increase at a faster rate with increasing number of distractors than conjunctive present searches.