RECORD THE RESULTS OF THE EXPERIMENT IN THE TABLE BELOW

Trial	Epochs To Converge	
	Low Similarity	High Similarity
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
Mean		
Variance		

EXERCISE 7.1

1. What are the independent and dependent variables for this experiment?

2. By examining the means in the table above, what can be concluded about the effects of the independent variable? Use appropriate statistical tests to support this conclusion.

3. From the brief description of some of the human results for the paired associate task that was given earlier in the chapter, would you conclude that the distributed associative memory is generating human-like results, or not?

4. What is the variance of the results for each condition? Why is this the case, and what are the implications for performing this kind of experiment?

5. Speculate on how the experimental methodology in this exercise could be modified to increase the variability in each column of data. Do not feel constrained by the James program – perhaps your proposed change in methodology would require some minor modifications to the program itself.

6. When the Hebb rule is used to train this kind of memory, what is the relationship between the training of the network and the two methods used to teach paired-associates to humans (i.e., the alternate study and recall method and the anticipation method)?

7. When the delta rule is used to train this kind of memory, what is the relationship between the training of the network and the two methods used to teach paired-associates to humans (i.e., the alternate study and recall method and the anticipation method)?