1. confidence interval (CI)

Question: The Environmental Protection Agency (EPA) is concerned about the amounts of PCB, a toxic chemical, in the milk of nursing mothers. In a sample of 20 women, the amounts (in parts per million) of PCB were as follows:

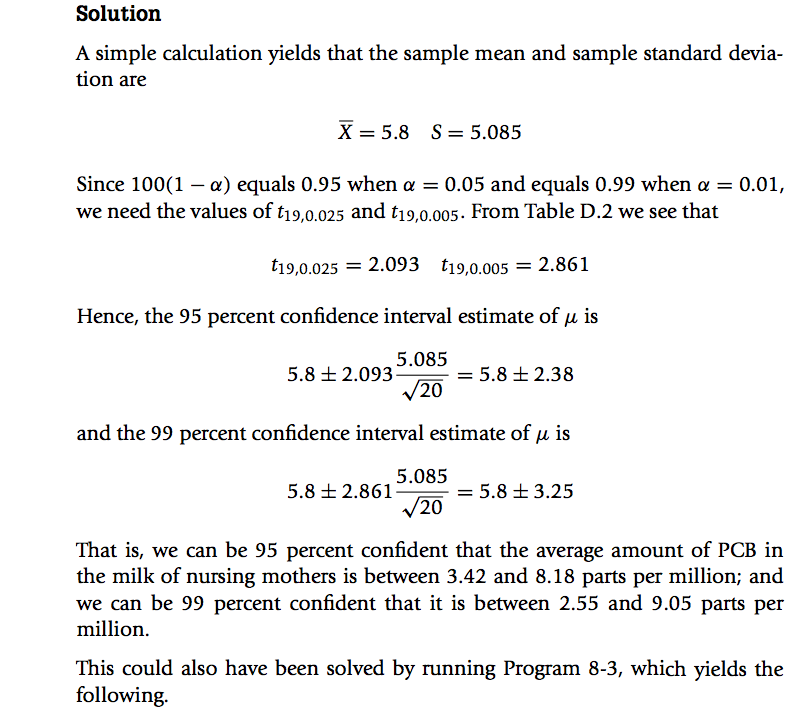
16,0,0,2,3,6,8,2,5,0,12,10,5,7,2,3,8,17,9,1

Use these data to obtain a

**(a)** 95percentconfidenceinterval

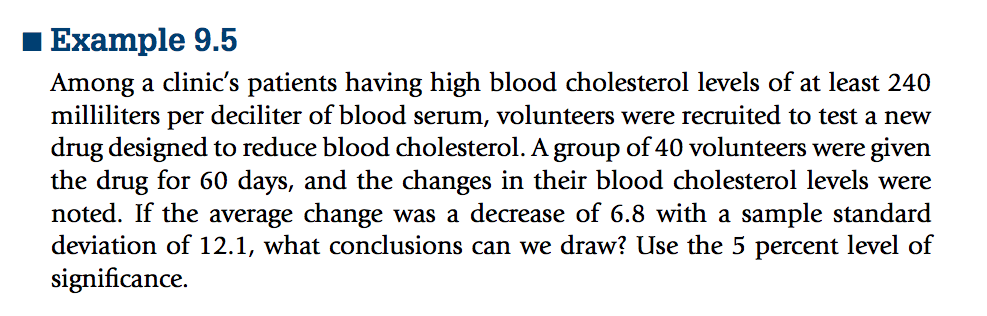
**(b)** 99percentconfidenceinterval

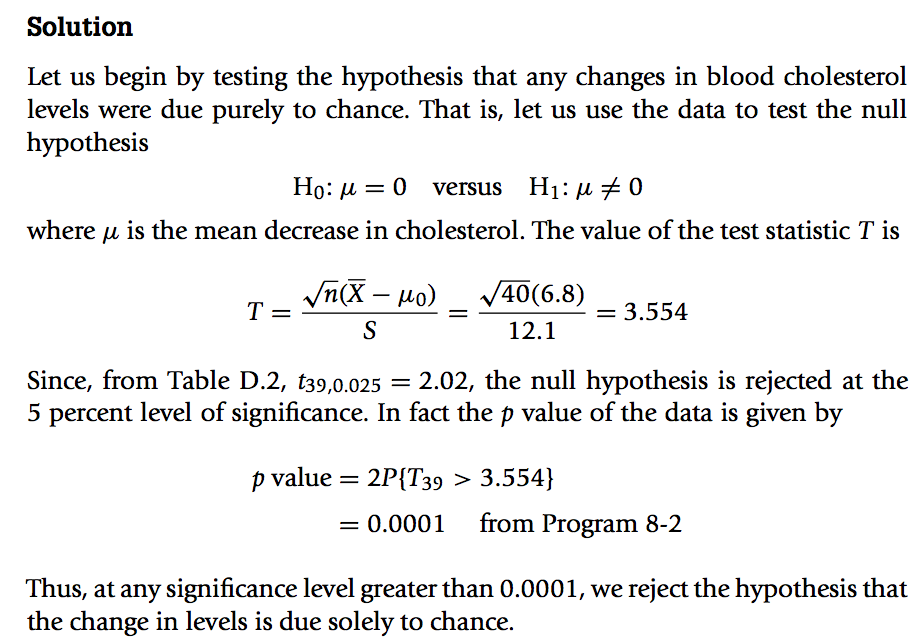
of the average amount of PCB in the milk of nursing mothers.



--------Introductory statistics (Sheldon M.Ross, third edition)

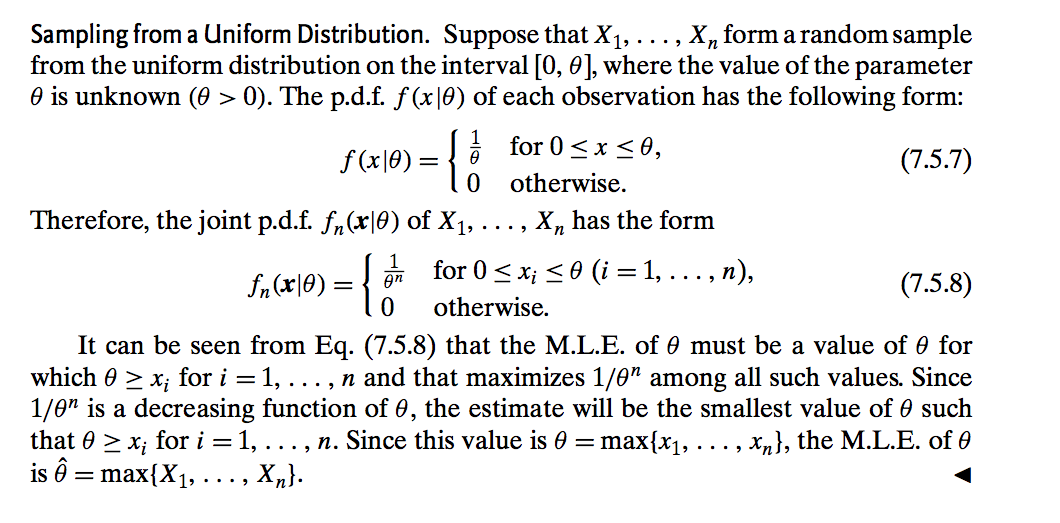
1. Testing hypothesis





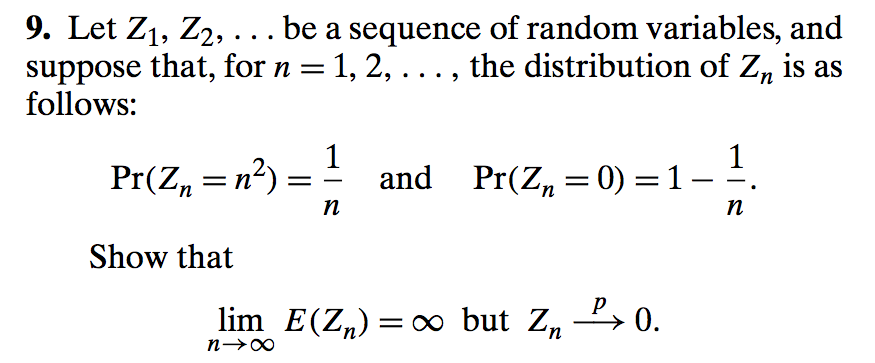
--------Introductory statistics (Sheldon M.Ross, third edition)

1. maximum likelihood estimate



-----Probability and Statistics(morris H.degroot, mark J.schervish, fourth eidition)

1. convergence in probability



-----Probability and Statistics(morris H.degroot, mark J.schervish, fourth eidition)

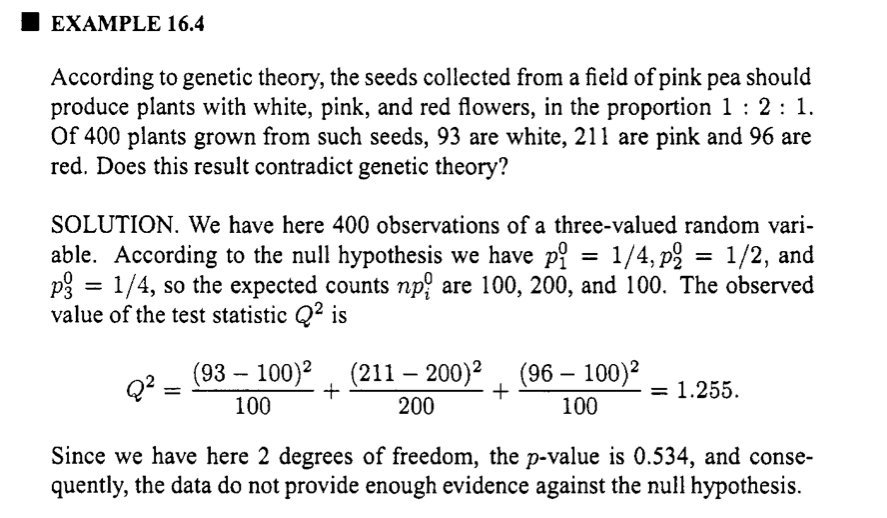
Solution:

Because

However

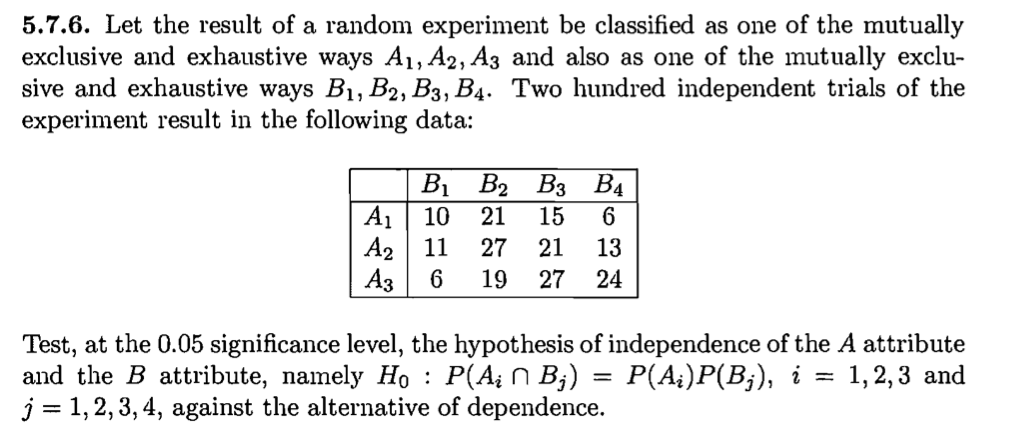
So

1. chi- square test



----------probability and statistical inference (Robert Bartoszynski, Magdalena Niewiadomska-Bugai, second edition)

1. chi- square test



---------introduction to mathematical statistics sixth edition and solution

Solution:

Because

So

Because 0.05=12.6 < 12.9

So reject H0 at the significance level of 0.05 and view that it isn’t independent.