

MAT 3312 Homework 5 Spring 21 (Hand written and Computing Assignment)

Name: _____

Date: _____

Due by 12:40pm April 19th You will only have one attempt to upload. This assignment requires SAS.

Answer Questions 1-4 by hand

Needles are one of the most commonly shared drug supplies among users. Is there an association between sharing needs to inject drugs and contracting HIV? A survey was conducted on 100 users. **Use the table below to answer questions 1-4.**

	Positive for HIV	Negative for HIV
Share needles	32	18
Do not share needles	10	40

Question 1. Calculate the expected contingency table.

Question 2. Calculate the chi-square test statistic.

Question 3. What is the p-value based on the chi-square test?

Question 4. What is the conclusion from the chi-square test?

Use SAS to answer the questions below

The data set in the table below is based on 214 children with acute otitis media (OME) who participated in a randomized clinical trial. Each child had OME at the beginning of the study in either one or both ears and was randomly assigned to receive a 14-day course of one of two antibiotics either cefaclor (CEF) or amoxicillin (AMO)

Table 3.11 Format for EAR.DAT

Column	Variable	Format or code
1-3	ID	
5	Clearance by 14 days	1 = yes/0 = no
7	Antibiotic	1 = CEF/2 = AMO
9	Age	1 = < 2 yrs/2 = 2-5 yrs 3 = 6+ yrs
11	Ear	1 = 1st ear/2 = 2nd ear

Import the ear dataset in the SAS to answer the questions below.

Question 5. What is the distribution regarding age in the dataset? Please provide a contingency table (with count and percent) to show the distribution of the variable. Paste results from SAS here.

Test whether there is an association between medication received and clearance of infection by 14 days? Use the information to answer questions 6-8.

Question 6. Perform a chi-square test and provide the contingency table from the test. Paste results from SAS here.

Question 7. What is the chi-square test statistics?

Question 8. What is the p-value?

Question 9. What is the conclusion?