

Show **all** of your work on this assignment and answer each question fully in the given context.

Please staple your assignment!

1. Chapter 5, Section 4, Exercise 2 (page 300)

2. Chapter 5, Section 4, Exercise 3 (page 300)

Note: the table at the bottom left of page 300 has a typo: going down the y column the values given are "1, 2, 3, 3" when they should be "1, 2, 3, 4."

Hint: Understanding the process of testing for the toxic specimen is key.

- If there is NOT a contaminated specimen (the $X = 0$ case), then we will not find it on any test (cause it's not there).
- If there is a contaminated specimen (the $X = 1$ case):
 - we may find it on the first test, the second test, the third test, or the fourth test.
 - since there is no way to know which specimen is toxic, we can only randomly select them until we find the toxic one.

3. Chapter 5 Exercise 35 (page 330)