

5.8 We are drawing from 5 items A, B, C, D, E (exactly one of which is defective). Draws are to be made without replacement and with equal probability on items then remaining (sound familiar?). Let D denote selection of a defective item and G denote selection of a non-defective item. We are asked for $P(D1 \text{ or } D2)$. Use the addition rule and “order of the deal does not matter” to intuit $P(D2)$.

5.12 The problem is about conditional probability (not independence as I indicated). If E goes out of business they want you to think of the probabilities of suppliers A, B, C, D being the conditional probabilities conditional on E going out of business. These would be (for A, B, C, D respectively)

$$.2/.9 \quad .25/.9 \quad .15/.9 \quad .3/.9$$

Actually, I dispute the assumption that the conditional probabilities would apply in this case but we’ll go ahead and use them anyway.

Why might the conditional probabilities NOT apply? Perhaps supplier E is “in the family” as is supplier C. With E out of business perhaps C would be more likely than $.15/.9$ to get the bid since some or all of the support for E could shift to C.

5.14 I will go over this in class tomorrow, 9-14-07. Here is the relevant tree

