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Assignment 15 Quiz 11 Pt 2

**Question 2**

In a raffle there are 100 tickets. 10 of the tickets have prizes. The tickets are mixed in a bowl and then two tickets are drawn, one after the other. What is the probability that just one of the tickets has a prize?

**Answer:**

P(W1) = 10 / 100

P(L1) = 90 / 100

P(L1 | W2) = 10 / 99

P(W1 | L2) = 90 / 99

Probability of the first ticket having a prize

and not the second = P(W1 | L2) \* P(W1) = (90 / 99) \* (10 / 100) = 1 / 11 = 9%

Probability of the second ticket having a prize

and not the first = P(L1 | W2) \* P(W1) = (10 / 99) \* (10 / 100) = 1 / 99 = 1%