CSE 312: Foundations of Computing II

QuickCheck: Conditional Probability (due Thursday, April 12)

Name:

0. Everyday is Championship Day

The Seahawks are considering you for the 3rd-string quarterback (QB) position (behind the 1st- and 2nd-string QBs). The probability the Seahawks win the Super Bowl next season is 0.4. The probability that the 1st-string QB is starting the playoffs is 0.91. The probability that the 2nd-string QB is starting the playoffs is 0.08.

(a) What is the probability that you will be starting the playoffs? The Seahawks only use 1st-, 2nd-, and 3rd-string QBs.

(b) The probability the Seahawks win the Super Bowl AND the 1st-string QB starts the playoffs is 0.39. The chances of them winning the Super Bowl given the 2nd-string QB starts is 0.11. What is the chance they win the Super Bowl given that you (3rd-string) are the starting quarterback?

(c) Suppose you are starting during the playoffs, what is probability the Seahawks will not win the Super Bowl?