

Name: _____

Section: _____

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Quiz on 7.5: Bayesian inference

1. The Cherry Coke machine has a 83% chance to give you Cherry Coke, but only if you sing to it. If you don't sing, the machine has only a 58% chance of giving you a Cherry Coke. You regularly go to get a Cherry Coke, but you estimate you'll only sing to it about 20% of the time. About how often, overall, will you get your Cherry Coke?

2. Two dice are rolled. Let A be the event the total is 11 or 12, and B be the event that both dice are even.

a. What is the probability of A ?

b. What is the probability of B ?

c. What is the probability of $A \cap B$?

d. Are A and B independent?