Statistics 31, Section 3, Homework # 8

Due: Thursday, October 19, 2000

B8: A company makes 40% of its cars at Factory A and the rest at Factory B. Factory A produces 10% lemons and Factory B produces 5% lemons. A car is chosen at random. What is the probability that:

(a) It came from Factory A? (0.4)
(b) It is a lemon, if it came from Factory A? (0.1)
(c) It is a lemon from Factory A? (0.04)
(d) It is a lemon? (0.07)
(e) It came from Factory A if it is a lemon? (4/7)

4.89, 4.91

4.93

B9: The work force in a town has $\begin{pmatrix} 20\% \\ 50\% \\ 30\% \end{pmatrix}$ workers with $\begin{pmatrix} NoHS \\ HS, noC \\ C \end{pmatrix}$ education. Past experience indicates that $\begin{pmatrix} 10\% \\ 30\% \\ 90\% \end{pmatrix}$ of workers with $\begin{pmatrix} NoHS \\ HS, noC \\ C \end{pmatrix}$ education can perform a given task. Find the probability that a randomly chosen worker:

(a) Can perform the task (0.44)
(b) Is College educated, if (s)he can perform the task. (0.614)