Mathematics/Statistics 511

Quiz #5

Name: __________________________

1. Define what it means for events $B_1, B_2, \ldots, B_m$ to partition the sample space $S$.

2. Let events $B_1, B_2, \ldots, B_m$ partition the sample space $S$ and assume that $P(B_i) \neq 0$ for all $i$. Then for any event $A$ with $P(A) \neq 0$ state Bayes’ Law for computing $P(B_k|A)$.

3. If $S = B_1 \cup B_2$ with $B_1 \cap B_2 = \emptyset$ and $A$ is an event with $P(A) \neq 0$ then give the derivation of Bayes’ Law for $P(B_2|A)$. 