MATH 113: DISCRETE STRUCTURES
WEDNESDAY WEEK 10 HANDOUT B

Metaproblem. Answer the following questions about Problem 1 *before* attempting a solution. Compile these answers and then work on a solution to the problem if time remains.

(a) To what core topics is the problem related?
(b) List a couple or several problem solving or proof techniques that might be useful.
(c) If the problem is stated abstractly, devise a concrete version. If the problem is phrased in concrete terms, create and abstract version.
(d) *If this is your last problem*, make a list of core topics not covered by the four review problems.

Problem 1. Suppose A and B are two events with $P(A) = 0.5$, $P(A \cup B) = 0.8$.

(a) For what values of $P(B)$ would A and B be mutually exclusive?
(b) For what values of $P(B)$ would A and B be independent?