Note the Problem 9 in Project IV says, at the beginning,
   "These questions should be answered based on your previous work in this Project. There is no need
to introduce ideas which we have not discussed in class, or even ideas which are not specifically
referred to in this Project"
At the end, in large boldface font, there is the warning,
   "As usual, the parts of this problem (Problem 9) are related to the preceding problems. Don't just
pull your answers out of the blue!"
After part (a) in Problem 9, there is the statement,
   "Combine #6 and #7 to answer this in the case where $S$ is nonempty."

In the instructions, there is the note,
   "9. Read the instructions for Problem 9 carefully. Note the explicit request to relate your answers to
the questions in Problem 9 to the previous work in this project. Answers which contain no relevant
reference to the basis of the answers, given previous work in this project, will receive no credit, even
if they are correct."

Problem 9 in Project IV is the whole point if the project, the culmination. That is the reason for all these
instructions to Use Previous Results. Note that Problem 9 is stated to be worth 90 points. As stated
within the Project questions and in the instructions, Problem 9 was supposed to be answered based on
the work in the previous problems.