Name _____

Finite Mathematics (Math 10120), Spring 2020
Quiz 1, Monday, January 27

1. Let A and B be subsets of some universal set U. Assume that $n(U) = 100{,}000$, $n(A \cup B) = 90$, $n(A) = 60$. How many elements are in $A' \cap B$? Show your work, preferably with a Venn diagram. [Warning: not all of the given information is needed to solve the problem.]

2. A gang of bank robbers has robbed a bank, but luckily a somewhat near-sighted witness saw the license plate of the get-away car. The witness said that the license plate consisted of **two letters** followed by **three digits**. Each letter was either E, F or P (possibly repeated) and each digit was either 3 or 8 (possibly repeated). So, for example, it might have been FF-383. With this information, how many possible license plates are there for the police to track down?