

Are Rewrites Required? No. You can choose not to rewrite and then your score on a problem remains what it was on the first draft. To make my life easier, please do NOT turn in a rewrite that is identical to the first draft. Better to not turn in a rewrite of that problem.

Commutativity of Addition. In class I made kind of a big deal about the fact that Charlotte had successfully proven associativity as part of her solution to this problem. I should now make an equally big deal for others in the class who proved associativity: Joe, Mike W, and Mike B. Good job! (And if I have left out anyone else who proved associativity, my apologies and “good job” to you, too.)

Extra Problem 2 in Section 4. Just about everyone did this by contradiction, but there is a simple direct proof.

Let $n \in \mathbb{N}$. Then $n > 0$ implies $1/n > 0$, and thus $a - 1/n < a$. By definition of supremum, $a - 1/n$ is not an upper bound for A . That means there exists some $b \in A$ such that $b > a - 1/n$. On the other hand, since $b \in A$, $b \leq \sup A = a$. Next observe that $b \neq a$ because $b \in A$ and $a \notin A$. It follows that $b < a$. So $a - 1/n < b < a$, and that shows $b \in (a - 1/n, a) \cap A$.