

Math 1190 Quiz #2

Problem 1: Given a set of $n + 1$ distinct positive integers, none of which is greater than $2n$, prove that at least two of the integers are relatively prime.

Problem 2: A college senior is studying for the MCAT, which is 11 weeks away. He decides that he will study at least 1 hour every day; however, he gets tired if he studies too much, so he also decides that he will never study more than 12 hours during any one of the remaining weeks. Show that there exists a series of consecutive days in which the senior studies exactly 20 hours.

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