

Name: _____

Pid: _____

1. (10 points) Let n be a positive integer. Show that in any set of n consecutive integers there is at least one divisible by n .

2. Prove that for every integers a_1, \dots, a_n there are $k > 0$ and $\ell \geq 0$ such that $k + \ell \leq n$ and $\sum_{i=k}^{k+\ell} a_i$ is divisible by n .