

## HOMEWORK 9

- 1) (PHP) Let  $S$  be a subset of size  $n + 1$  of the set  $\{1, 2, 3, \dots, 2n\}$ . Prove  $S$  contains a pair of relatively prime numbers. Give an exam of a set of size  $n$  for which this is false.
- 2) Book problem 10.6.
- 3) Repeat 10.6 with the function onto instead of one-one.
- 4) Book problem 10.19
- 5) Book problem 10.24.

Book Problems [not collected]: 10.1, 10.3, 10.30, 10.33.