

HOMEWORK II
THEORY OF NUMBERS

due on September, 21, 2017, by 3.30pm
submit by email to pirutka@cims.nyu.edu

1. Prove that the product of any three consecutive integers is divisible by 6.
2. Use the Euclidean algorithm to compute $\gcd(54321, 9876)$.
3. Find one integer solution of the equation

$$62x + 34y = 2.$$

4. Find all integer solutions of the equation

$$15x + 33y = 7.$$

5. Find all integer solutions of the equation

$$19x + 99y = 3.$$