

**HOMEWORK 8**  
**MATH-UA 0248-001 THEORY OF NUMBERS**  
due on Nov, 16, 2020

1. Express the integers 231,  $391 = 17 \cdot 23$  and  $2109 = 37 \cdot 57$  as sums of four squares.
2. Find all primes that are representable as sums of two cubes.
3. Show that no integer of the form  $9k + 4$  or  $9k + 5$  is a sum of three cubes.