

MATH 5420

HOMEWORK 10

DUE JULY 25, 2017

1. If $G = \mathbb{R}^\times$ and $N = \{-1, 1\}$, show how you can ‘identify’ G/N as the group of all positive real numbers under multiplication. What are the cosets of N in G ?
2. p. 176 # 18
3. p. 176 # 21
4. p. 176 # 23
5. p. 177 # 27
6. p. 190 # 8
7. p. 190 # 13
8. Find the quotient and the remainder when $x^3 + 2$ is divided by $2x^2 + 3x + 4$ in \mathbb{Z}_3 and \mathbb{Z}_5 .
9. p. 200 # 1 a, d
10. p. 201 #2 b, c
11. p. 201 #5 a, d