

- Integral domains, Euclidean domains, and their properties
 - Suggested review: HW #7 problems 2, 3, and 6.
 - Suggested reading: lecture notes 4.1.1-4.1.2.
 - Irreducible and prime elements, unique factorization
 - Suggested review: HW #7 problems 5 and 6
 - Suggested reading: lecture notes 4.1.3-4.1.4.
 - Modular arithmetic and R/rR
 - Suggested review: HW #8 problems 1 and 2.
 - Suggested reading: lecture notes 4.2.1-4.2.2.
 - Units and zero divisors in R/rR
 - Suggested review: HW #8 problems 1-3.
 - Suggested reading: lecture notes 4.2.3.
 - The Chinese Remainder Theorem, Fermat's little theorem, and Euler's theorem in R/rR
 - Suggested review: HW #8 problems 1d, 2d, and 4, HW #10 problem 4d.
 - Suggested reading: lecture notes 4.2.4-4.2.5, Lecture 23.
 - Polynomial functions, roots, and factorization
 - Suggested review: HW #9 problems 1 and 4.
 - Suggested reading: lecture notes 4.3.1, Lecture 24.
 - Finite fields, counting irreducible polynomials in $\mathbb{F}_p[x]$
 - Suggested review: HW #9 problems 2, 3ab, and 5.
 - Suggested reading: lecture notes 4.3.2, Lecture 25.
 - Primitive roots
 - Suggested review: HW #9 problems 3cdef and 6.
 - Suggested reading: lecture notes 4.3.3, Lecture 26.
 - Modular arithmetic in $\mathbb{Z}[i]$
 - Suggested review: HW #10 problems 1(i), 4, and 6.
 - Suggested reading: lecture notes 4.4.1, Lecture 27.
 - Factorization in $\mathbb{Z}[i]$
 - Suggested review: HW #10 problem 1(ii).
 - Suggested reading: lecture notes 4.4.2, Lecture 28.
 - Sums of two squares, Pythagorean triples
 - Suggested review: HW #10 problems 2, 3, and 5.
 - Suggested reading: lecture notes 4.4.2, Lecture 28.
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