Definition and Theorem Statements:

- Well Ordering Principle
- Principle of Mathematical Induction
- Divisibility
- Division Algorithm
- Modular Equivalence
- Fundamental Theorem of Arithmetic

- Chinese Remainder Theorem
- Wilson's Theorem
- Fermat's Little Theorem
- Euler's Theorem
- Euler's $\phi$-function

Theorem Proofs:

- Fundamental Theorem of Arithmetic
- Chinese Remainder Theorem
- Wilson's Theorem
- Fermat's Little Theorem or Euler's Theorem
- Basic properties of divisibility and/or modular arithmetic
- Basic example of proof by induction

Computations:

- Euclidian Algorithm
- Writing G.C.D. as a linear combination
- Linear Diophantine equations
- G.C.D. and L.C.M. using the Fundamental Theorem of Arithmetic
- Multiplicative inverses modulo an integer $m$
- Solve a linear congruence equation
- Solve a system of equations using the Chinese Remainder Theorem
- $\phi(n)$ for various $n \in \mathbb{N}$