Know the statements of theorems 3.17, 3.18, 3.23 (same as 3.22)

Know the statement of Wilson's Theorem, 3.20, including that the converse is true (exercise 3.4.11).

Be able to do a simple problem like 3.4.2, or a step in such a problem. The steps are

a. Solve $f(x) \equiv 0 \pmod{p}^e$ from solutions to $f(x) \equiv 0 \pmod{p}$
b. Convert to a collection of systems of linear equations
c. Solve the resulting systems

Know the statement of theorem 4.7: which integers have primitive roots

Know the statements of theorems 5.3, 5.4 (Gauss's Lemma), 5.7 (Quadratic Reciprocity)

Know the PNT, namely, $\lim_{x\to\infty} \dfrac{\pi(x)}{x/\ln x} = 1$

Know the definition of O: $f = O(g)$ means $\exists N\, \exists M\, \forall x > N\ |f(x)| < Mg(x)$