

What to Study for Test #1  
MTH 4436 – Number Theory  
Fall 2016

Test #1 covers Sections 1.1 – 2.4 (inclusive) in the text

Definitions and Theorems That You May Be Asked to State:

The Well Ordering Principle  
The Binomial Theorem  
Pascal's Rule  
The Division Algorithm  
Def – *a divides b*, denoted  $a|b$   
Def – *Greatest Common Divisor*  
Theorem 2.2  
Theorem 2.3 & Corollary  
Def – *relatively prime*  
Theorem 2.4  
Corollary 2 (of Theorem 2.4)  
Euclid's Lemma  
Theorem 2.6

Any Theorem or Lemma that has a name, you should KNOW by name. The other theorems, lemmas, and corollaries you should know so that you can give their statement when asked something like: “state three theorems, lemmas, corollaries, etc. involving  $\gcd(a,b)$ .”

Know How to Do:

Pascal's Rule (Know how to prove this)  
Theorem 2.2 a, c, d, f (Know how to prove this)

All homework problems assigned in sections 1.1 – 2.4 (inclusive) *except*:

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Page 19 #1, 5  
Page 31 #4 c, d; 5