

**MTH 310 – Winter 2008**  
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**Week 1**

**Thursday January 10**

- Hand in Preview Assignment #1.
  - Before class, read Section 1.3 and Section 1.7.
  - Before class, complete Preview Assignment #1.
  - Before class, complete the following Exercises:
    - Section 1.3 – 3, 7, 8, 9, 19, 23, 37, 41, 42, 43
    - Section 1.7 – 1, 5, 9, 26, 27, 28, 29, 32, 33 (review of matrix algebra)
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**Week 2**

**Tuesday January 15**

- Hand in Preview Assignment #2.
- Before class, read the Equivalence Relations handout.
- Before class, complete the following Exercises:
  - Equivalence Relations Handout – 1, 2, 5, 6, 9, 10, 11, 15
- Before class, read the Equivalence Classes Handout.

**Thursday January 17**

- Hand in Preview Assignment #3
  - Before class, complete the following Exercises:
    - Equivalence Classes Handout – 3, 5, 11, 13(a)
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**Week 3**

**Tuesday January 22**

- Hand in Preview Assignment #4.
- Before class, read the Greatest Common Divisor handout (Section 8.1 of the MTH 210 text) through Progress Check 8.4.
- Before class, complete the following Exercises:
  - Greatest Common Divisor Handout – 1, 2, 5(a, b, f)

**Thursday January 24**

- Hand in Preview Assignment #5
  - Before class, complete the following Exercises:
    - Greatest Common Divisor Handout – 3, 6
    - Prime Numbers and Prime Factorizations Handout – 1, 2, 4, 5
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**Week 4**

**Tuesday January 29**

- Hand in Preview Assignment #6.
- Review material to this point.

**Thursday January 31**

- Before class, complete the following Exercises:  
Prime Numbers and Prime Factorizations Handout – 7, 8, 14, 15, 17  
**Exercise:** Let  $a$  and  $b$  be integers and let  $c = ab + 1$ . Determine  $\gcd(a, c)$   
and justify your conclusion.
  - Preview Assignment #7 will be done in class.
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**Week 5**

**Tuesday February 5**

- Before class, complete the following Exercises:  
Section 3.1 – 5, 7, 13, 14, 15, 16, 17
- In class, discuss Sections 3.1 and 3.2

**Thursday February 7**

- Hand in Preview Assignment #8
  - Before class complete the following Exercises:  
Section 3.1 – 21, 27, 33, 38, 39, 41, 44  
Section 3.2 – 5, 7, 13, 21, 22,
  - In class, complete the discussion of Section 3.2 and begin the discussion of Section 3.3.
  - Before the next class, complete the following exercises:  
Section 3.2 – 15, 21, 22, 34, 39, 40, 41, 43, 44, 45, 46, 49
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**Week 6**

**Tuesday February 12**

- Hand in Preview Assignment #9
- Before class, complete the following exercises:  
Section 3.2 – 34, 39, 40, 41, 43, 44, 45, 46, 49  
Section 3.3 – 7, 8, 9, 13, 19, 21, 25, 30, 31, 32
- In class, complete the discussion of Section 3.3 and discuss Section 3.5.

**Thursday February 14**

- Hand in Preview Assignment #10
  - Before class, complete the following Exercises:  
Section 3.5 – 1, 5, 10, 11, 13, 14
  - In class, discuss Section 3.5 and begin discussion of Section 3.4.
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**Week 7**

**Tuesday February 19**

- Hand in Preview Assignment #11
- Before class, complete the following Exercises:  
    Section 3.5 – 16, 17, 25, 31  
    Section 3.4 – 2, 5, 6, 9, 10, 13
- In class, discuss Section 3.4.

**Thursday February 21**

- Before class, complete the following Exercises:  
    Section 3.4 – 15, 19, 25, 27, 31, 33, 42, 45
  - In class, review for the mid term exam.
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**Week 8**

**Tuesday February 26**

- Mid Term Exam

**Thursday February 28**

- Hand in Preview Assignment #12
  - In Class, discuss Section 4.1.
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**Week 9**

**Tuesday March 11**

- Hand In Preview Assignment #13
- Before class, complete the following Exercises:  
    Section 4.1 – 1, 5, 11, 15, 22, 24, 25, 26, 28, 35
- In class, discuss Section 4.1 and begin discussion of Section 3.6.

**Thursday March 13**

- Meet in the computer lab. In class, discuss Section 3.6.
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**Week 10**

**Tuesday March 18**

- In Class – Discuss isomorphisms and homomorphisms

**Thursday March 20**

- In Class – Discuss Section 3.7
  - Before class, complete the following Exercises:  
    Section 3.6 – 1, 3, 6, 13, 16, 19
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**Week 11**

**Tuesday March 25**

- Hand in Preview Assignment #14.
- In Class – Discuss Section 4.1 and Section 4.2
- Before class, complete the following Exercises:  
Section 3.7 – 1, 3, 16, 17, 19, 21, 22, 25, 31, 35, 37

**Thursday March 27**

- In Class – Discuss Section 4.2
  - Before class, complete the following Exercises:  
Section 4.1 – 29, 31, 32, 36, 37  
Section 4.2 – 1, 5, 13, 14, 17
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**Week 12**

**Tuesday April 1**

- Hand in Preview Assignment #15.
- In Class – Discuss Section 5.1
- Before class, complete the following Exercises:  
Section 4.2 – 27, 28, 30, 31, 32, 36

**Thursday April 3**

- In Class – Discuss Section 5.1
  - Before class, complete the following exercises:  
Section 5.1 – 6, 7, 11, 15, 25, 28, 29
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**Week 13**

**Tuesday April 8**

- Hand in Preview Assignment #16.
- In Class – Discuss Section 5.2
- Before class, complete the following exercises:  
Section 5.1 – 17, 23, 34, 37, 39, 40, 41, 43

**Thursday April 10**

- In Class – Discuss Section 5.3
  - Before class, complete the following exercises:  
Section 5.2 – 1, 5, 9, 13, 25, 27, 28, 29
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**Week 14**

**Tuesday April 15**

- In Class – Discuss Sections 5.3 and 5.4
- Before class, complete the following exercises:
  - Section 5.2 – 17, 20, 21, 35, 36, 37, 39
  - Mistake in statement of Exercise 39: If  $p(x)$  and  $u(x)$  are relatively prime and  $p(x)$  divides  $u(x)v(x)$ , then  $p(x)$  divides  $v(x)$ .
  - Section 5.3 – 1, 7, 9, 13, 15, 17, 33, 34, 35

**Thursday April 17**

- In Class – Discuss Section 5.5
  - Before class, complete the following exercises:
    - Section 5.3 – 18, 19, 23, 27, 29, 32, 36, 37, 39, 45
    - Section 5.4 – 3, 7, 13, 21, 23, 33
  - Exercises from Section 5.5: 13, 17, 25, 31, 41, 47, 48
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**Final Exam: Wednesday April 23, 2008 from 8:00 a.m. to 9:50 a.m.**