

# MATH 2250 Departmental Syllabus – Problem List

## Unit 2: 3.3-3.10

### 3.3 Differentiation Rules

**Problems: 3.3 #1, 3, 5, 7, 11, 15, 17, 21, 30, 31, 32, 37, 39, 45, 51, 53, 55, 56, 59, 72, 76, 77**

### 3.4 The Derivative as a Rate of Change

**Problems: 3.4 #1, 5, 7, 10, 11, 15, 17, 18, 21, 23, 28, 31**

**Additional and Advanced Exercises (p. 212) #8**

### 3.5 Derivatives of Trigonometric Functions

**Problems: 3.5 #1, 9, 12, 13, 15, 16, 19, 22, 26, 33, 35, 43, 45, 57**

### 3.6 The Chain Rule

**Problems: 3.6 #1, 3, 5, 9, 11, 15, 17, 19, 27, 31, 35, 43, 47, 49, 52, 53, 61, 63, 65, 71, 83, 87, 97, 103**

**Additional and Advanced Exercises (p. 207) #17, 18**

### 3.7 Implicit Differentiation

**Problems: 3.7 #1, 5, 15, 19, 21, 27, 41, 46, 49**

**Additional and Advanced Exercises (p. 206) #6**

### 3.8 Derivatives of Inverse Functions and Logarithms

**Problems: 3.8 #3, 11, 13, 21, 25, 27, 29, 32, 41, 51, 57, 61, 63, 65, 91, 93, 95, 98**

### 3.9 Inverse Trigonometric Functions

**Problems: 3.9 #1, 3, 7, 21, 23, 30, 33, 34, 42, 43, 50**

### 3.10 Related Rates

**Problems: 3.10 #1, 2, 13, 15, 17, 19, 20, 21, 23-25, 27-29, 32, 33, 35, 39, 40**