

Ma 308 ~ Theory of Interest Recommended Problems from the Textbook

1. Moving Money - Chapters 1-3
 - 1.1 Accounting for Time - 1.3, 3.1
 - 1.1.1 Simple Interest/Discount
Homework: 1.3 # 3-7, 15, 21 (refer to 19), 23, 27
 - 1.1.2 Compound Interest/Discount
Homework: 3.1 # 7-12
 - 1.2 Accruing Interest and Discounting Monies - 1.2, 1.4-1.6, 1.9, 2.1-2.6, 3.1-3.3
 - 1.2.1 Bank/Simple Interest and Discount
Theory Assignment 1
Homework: 1.2 # 6, 16, 17, 21, 23, 27
1.4 # 9, 13
1.5 # 5, 14, 21, 23
1.6 # 5, 9, 13, 15
1.9 # 5, 13, 15
2.1 # 1-4, 9, 11, 15, 19
2.2 # 7, 15, 19
2.3 # 4, 9, 11, 15, 19
2.4 # 5, 7, 13
2.5 # 5, 7, 11
 - 1.2.2 Compound Interest and Discount
Theory Assignment 2-4
Homework: 3.1 # 2-4, 17, 19, 23, 25, 33
3.2 # 5, 7, 11, 15, 17, 21
3.3 # 4, 5, 7, 8, 11, 15, 17
 - 1.3 Rates and Time - 3.5-3.6
 - 1.3.1 Finding the Compound Rate
Homework: 3.5 # 1, 7, 9, 11, 15, 19, 21, 23
 - 1.3.2 Finding Time for an Investment to Grow
Homework: 3.6 # 9, 10, 11, 17, 19
 - 1.4 Continuous Compounding - 3.8
Homework: 3.8 # 2, 5, 7, 13, 15
 - 1.5 Equations of Value - 1.7-1.8, 3.7
Homework: 1.7 # 4 (and why?), 5-7, 10, 13
1.8 # 7 & 8 (give an intelligent guess), 13, 17, 18
3.7 # 1, 9, 13, 15, 19, 23 & 24 (use v to solve)
 - 1.6 Equivalent/Average Time - 1.10
 - 1.6.1 Equivalent/Average Time
Homework: 1.10 # 1, 7, 13, 19
 - 1.7 Effective Interest Rates - 2.6, 3.3, 3.4, 3.8
 - 1.7.1 Simple Interest
Homework: 2.6 # 1-4, 7, 9, 11
 - 1.7.2 Simple Discount (aka Bank Discount)
Theory Assignment 5-6
Homework: 2.6 # 1-4, 7, 9, 11
 - 1.7.3 Compound Interest
Homework: 3.4 # 10, 13, 17, 19, 21, 27
 - 1.7.4 Compound Discount
Theory Assignment 7-9
Homework: 3.4 # 10, 13, 17, 19, 21, 27
 - 1.7.5 Continuous Compounding
Homework: 3.8 # 17, 19, 20
 - 1.8 Rates of Change and the Force of Interest - 3.9
 - 1.8.1 Rates of Change
Homework: 3.9 # 1-7, 12-14, 17-21
 - 1.8.2 Force of Interest
Theory Assignment 10
Homework: 3.9 # 1-7, 12-14, 17-21
2. Annuities - Chapters 4-5, 9
 - 2.1 Ordinary Annuities - 4.1-4.6
 - 2.1.1 PV, FV, Pmts
Theory Assignment 11
Homework: 4.1 # 1-3, 7, 9, 13, 14, 21, 23, 25, 27, 28
4.2 # 5, 7, 9, 11, 15, 19, 23, 25
4.3 # 4, 6, 7, 9, 15, 1, 19, 20
 - 2.1.2 Periods and Rate

- Homework:* 4.4 # 1, 2, 5, 7, 13, 15, 19, 21, 23-25
 4.5 # 5, 7, 9, 13, 15, 20
 4.6 # 2, 5, 13, 17, 19, 21
- 2.2 Compound Interest and Annuities - 5.1-5.4, 5.6, 5.7
- 2.2.1 Basic Annuities
Theory Assignment 12-13
Homework: 5.1 # 1, 3, 4, 7, 8, 10
 5.2 # 2, 7, 15, 19, 21, 30
 5.3 # 1-3, 5, 6, 8, 9, 13, 15, 23
 5.4 # 1, 3, 6, 9, 15, 22
- 2.2.2 General Annuities
Theory Assignment 14-15
Homework: 5.6 # 1-4, 10, 11, 13a, 15
 Handout
- 2.2.3 Continuous Compounding
Theory Assignment 16
Homework: 5.7 # 2, 3, 8, 9, 11
- 2.3 Perpetuities - 5.5
Theory Assignment 17
Homework: 5.5 # 1, 3-5, 11, 13, 19 (use 8%(1) instead),
 21, 22
- 2.4 Continuous Streams - 9.1
Homework: 9.1 # 2, 3, 5, 6
- 2.5 Variable Payments - 9.2, 9.4
Theory Assignment 18-20
Homework: 9.2 # 5, 6, 7, 10, 11, 13, 14, 15, 16
- 2.5.1 Arithmetic Payments
- 2.5.2 Geometric Payments
- 2.5.3 Block Payments
Homework: 9.4 # 5, 7, 9, 11
- 2.6 Inflation - 9.3
Homework: 9.3 # 1, 2, 7, 9, 11

3. Applications of Annuities – Chapters 6-7
- 3.1 Mortgages - 6.1-6.5
- 3.1.1 Amortization
Theory Assignment 21
Homework: 6.1 # 3, 11, 13, 15, 17, 19, 20
- 3.1.2 Discount Points and APR
Homework: 6.2 # 3, 5, 7-9, 15, 17-19
- 3.1.3 Mortgages as Annuities
Theory Assignment 22
Homework: 6.3 # 1, 2, 5, 7, 9, 14
 6.4 # 3, 5, 7, 10, 11
- 3.1.4 Equity, Appreciation, and Taxes
Homework: 6.5 # 1-4, 7
- 3.2 Sinking Funds - 6.6-6.7
Theory Assignment 23
Homework: 6.6 # 2, 6, 13, 15, 17, 20, 22
 6.7 # 3-5, 9, 11, 13a, 15, 17
- 3.3 Bonds - 7.1-7.3
- 3.3.1 Valuation at Coupon Date
Homework: 7.1 # 5, 6, 8, 9, 15
 Handout
- 3.3.2 Valuation between Coupon Dates
Homework: 7.2 # 3-7, 12, 13, 15, 19, 20
- 3.3.3 Finding the Yield Rate
Homework: 7.3 # 11, 13, 15, 17, 19, 21, 23
- 3.3.4 Bond Writeup/Writedown
Homework: Handout
- 3.4 Stocks - 7.4
Homework: 7.4 # 5, 7, 9, 17, 19, 21, 23, 25
4. General Cash Flows
- 4.1 Portfolio/Investment Year Methods
Homework: Handout
- 4.2 Time/Dollar Weighted ROR
Homework: Handout