

# Applied mathematics exercises

## Contents

### Part 1 - Integral calculus

Chapter 1 - Antiderivatives .....	5
Chapter 2 - Definite integrals .....	25
Chapter 3 - Generalized integrals and integral function .....	45

### Part 2 - Probability

Chapter 4 - Probability calculus .....	75
Chapter 5 - Random numbers.....	85
Chapter 6 - Remarkable random numbers.....	97
Chapter 7 - Discrete random vectors.....	105

### Part 3 - Financial calculus

Chapter 8 - 1-variable financial laws .....	123
Chapter 9 - Annuities and DCF, NPV, IRR.....	147
Chapter 10 - 2-variable financial laws and decomposability.....	157
Chapter 11 - Amortizations, leasing and consumer credit .....	169
Chapter 12 - Term structures and bonds.....	181
Chapter 13 - Financial valuation - First part .....	195
Chapter 14 - Financial valuation - Second part .....	209