

# An Introduction to Scientific Computing with Maple Programming

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# Contents

Table of Contents	i
Scientific Computing Index	iii
<b>1 Fundamentals</b>	<b>1</b>
1.1 Maple and its worksheet . . . . .	2
1.2 Maple as a calculator . . . . .	3
1.3 Simple programming . . . . .	10
1.4 Conditional statements - Branching . . . . .	18
1.5 Common errors . . . . .	24
1.6 Writing a project report on a Maple worksheet . . . . .	25
1.7 Exercises . . . . .	25
1.8 Projects . . . . .	31
<b>2 Loops. Part I</b>	<b>35</b>
2.1 The “for-do” loop . . . . .	35
2.2 Iteration . . . . .	37
2.2.1 Newton’s iteration ( <i>Numerical Analysis</i> ) . . . . .	39
2.2.2 Chaotic map ( <i>Dynamic System</i> ) . . . . .	40
2.2.3 Continuous fractions ( <i>Number Theory</i> ) . . . . .	41
2.2.4 Continuous fractions, revisited . . . . .	42
2.3 Recursive summation . . . . .	43
2.3.1 Taylor series ( <i>Approximation Theory</i> ) . . . . .	44
2.3.2 Quadrature ( <i>Numerical Analysis</i> ) . . . . .	46
2.3.3 Nested sum ( <i>Elementary Algebra</i> ) . . . . .	47
2.4 Exploring scientific computing . . . . .	48
2.4.1 Fourier series ( <i>Harmonic Analysis</i> ) . . . . .	48
2.4.2 Solving congruences ( <i>Number Theory</i> ) . . . . .	48
2.5 Exercise . . . . .	48
2.6 Projects . . . . .	56
<b>3 Loops. Part II</b>	<b>59</b>
3.1 The “while-do” loop . . . . .	59
3.2 The golden section method ( <i>Optimization</i> ) . . . . .	61

3.2.1	The unimodal function . . . . .	61
3.2.2	The golden ratio . . . . .	62
3.2.3	Method of the golden section . . . . .	63
3.3	Vectors . . . . .	65
3.3.1	Generating and accessing a vector . . . . .	65
3.3.2	Vectors as input . . . . .	66
3.3.3	Vectors as output . . . . .	67
3.3.4	Sorting ( <i>Computer Science</i> ) . . . . .	70
3.4	Exploring scientific computing . . . . .	71
3.4.1	The bisection method ( <i>Numerical Analysis</i> ) . . . . .	71
3.4.2	The greatest common divisor ( <i>Number Theory</i> ) . . . . .	72
3.4.3	Rational approximation ( <i>Number Theory</i> ) . . . . .	72
3.4.4	Rational approximation revisited ( <i>Number Theory</i> ) . . . . .	74
3.5	Exercise . . . . .	74

## Scientific Computing Index

### Numerical Analysis

– Zero-finding iterations

Babylonian method or Heron's iteration 37; Newton's iteration 39; Halley's iteration 49; Laguerre's iteration 49; fixed point iteration 59; bisection method 71

– Quadrature, Numerical integration 46

Trapezoidal rule 46; Simpson's rule 55

### Number Theory

Continuous fraction 41, 42, 50, 51, 52, 52, 52, 74; ascending continuous fraction 57; solving congruence 48, 52, 53; the Euclidean Algorithm for GCD 72; the Euclidean Algorithm for rational approximation 74; rational approximation 72, 74; Catalan numbers 48; Padovan sequence 48; Conway sequence 48; Fibonacci numbers 38; the  $3n + 1$  iteration 49

### Approximation Theory

Taylor series 44, 54, 54, 54, 54; Fourier series 48, 55; continuous fraction 51, 52.

### Dynamic System

Henon map 40; Ikeda map 50; Tinkerbell map 50

### Finance

Mortgage 27; annuity 15; tax schedule 30; tuition calculation 32; cost calculation 9

### Elementary Algebra

Quadratic equation 17, 28, 29, 29, 29, 32; cubic equation 25, 33; linear inequality 31; nested sum 47, 57, 55, 55, 56, 56

### Calculus

Harmonic series 74; Taylor series 44, 54, 54; infinite series 56 54, 54;

### Computer Science

Sorting 70;



# Introduction for Math 340 Students

Welcome to Math 340!

This text is a work-in-progress, based on a decade of class materials prepared by Prof. Zhonggang Zeng with added materials by Prof. David Rutschman.

Our hope is that you will use this book to build on what is done in class, so that you can become a confident user of Maple. Maple is a very useful tool for mathematicians, and this is your opportunity to make it yours!

We have included many examples and exercises - more than what will be assigned or covered in class. We hope that you will use them as practice problems. Take the time to try some of the examples, make sure they run, and then play around with changes.

We also welcome your input on this text. Please feel free to contact us (in person or by email: [D-Rutschman@neiu.edu](mailto:D-Rutschman@neiu.edu) or [Z-Zeng@neiu.edu](mailto:Z-Zeng@neiu.edu)).

Enjoy!

## Preface

This is not a book about the art of programming. It is about how to use programming as a tool when you do mathematics.

