CSCI 4325
Assignment 1 (100 points)

The homework is to be turned in by 5 P.M. on the day it is due. Style and correctness will be graded – be neat and thorough. This assignment must be typed in 12pt font, single spaced, and at least three pages in length. The heading must include the name of the book, the author, and your name. The heading must also be 12pt font, but should be bold.

In order to turn in the written assignment, each student must schedule a time to meet with me for 15 minutes to discuss the book. I have read most of the books on this list. It is important to remember that only two people may choose the same book. Thus, before you begin reading you should clear it with me, so you can claim that spot.

The point of this assignment is to expose you to other areas of Mathematics, Theoretical Computer Science, or Science in general, as well as letting you explore an area you are interested in while learning some history about the people and events involved. You must read one of the books listed in the accepted books (or an approved book). I will meet with each student individually upon the completion of the assignment to discuss the book. The three+ pages should address these topics:

1. A summary of the book
2. Why you chose this book
3. The most interesting thing you learned
4. Something you wished the book had covered more thoroughly

Note that there are many more books that would be acceptable for this assignment. The books listed below are merely a sampling of some good books and to illustrate the types of books I'm looking for. These are Math and Science books aimed at educated readers that give a lot of history and explain the concepts without getting into a lot of rigor. If there is a book you would like to choose that is not on this list, you must get approval first.
Accepted books:
Gamma – Julian Havil
The Irrationals: A Story of the Numbers You Can't Count On - Julian Havil
Life, Logarithms, and Legacy – Julian Havil
Impossible? - Julian Havil
Nonplussed! - Julian Havil
An Imaginary Tale: The Story of I – Paul Nahin
The Annotated Turing – Charles Petzold
Alan Turing: The Enigma – Andrew Hodges and Douglas Hofstadter
Godel, Esher, Bach: An Eternal Golden Braid – Douglas R. Hofstadter
A Beautiful Mind – Sylvia Nasar
e: the Story of a Number – Eli Maor
The Man Who Knew Infinity – Robert Kanigel
e = mc^2: A Biography of the World's Most Famous Equation – David Bodanis
My Brain is Open: The Mathematical Journeys of Paul Erdos – Bruce Schechter
The Man Who Loved Only Numbers – Paul Hoffman
Elliptic Tales – Avner Ash
The Poincare Conjecture – In Search of the Shape of the Universe – Donal O'Shea
Perfect Rigor – Masha Gessen
Fermat's Enigma – Simon Singh
The Code Book: The Science of Secrecy from Ancient Egypt to Quantum Cryptography
The Elegant Universe – Brian Greene
The (Fabulous) Fibonacci Numbers – Alfred S. Posamentier
Prime Obsession – John Derbyshire
Euler: The Master of Us All – William Dunham
Journey Through Genius: The Great Theorems of Mathematics – William Dunham
The Music of the Primes – Marcus Du Sautoy
Kepler's Conjecture – George G. Szpiro
Symmetry and the Monster: One of the Greatest Quests of Mathematics – Mark Ronan
Time Traveler: A Scientist's Personal Mission to Make Time Travel a Reality – Ronald L. Mallett
Time Travel and Warp Drives – Allen Everett and Thomas Roman
Relativity Simply Explained – Martin Gardner
Rosalind Franklin: The Dark Lady of DNA – Brenda Maddox
Continued Fractions – C. D. Olds
Lab Girl – Hope Jahren
Cosmic Anger: Abdus Salam The First Muslim Nobel Scientist – Gorden Fraser
Here's Looking at Euclid – Alex Bellos
Julia: A Life in Mathematics – Constance Reid
Godel's Proof – Ernest Nagel, James Newman
The High Frontier: Human Colonies in Space – Gerard K. O'Neill
The Girls of Atomic Citie – Denise Kiernan
Death by Black Hole: And Other Cosmic Quandries – Neil deGrasse Tyson
Ada's Algorithm – James Essinger
Hidden Reality – Brian Greene
Turing's Vision: The birth of Computer Science – Chris Bernhardt
The Immortal Life of Henrietta Lacks
Headstrong: 52 Women Who Changed Science and the World – Rachel Swaby