

Algorithms – Class X

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Math/Finance/CompSci

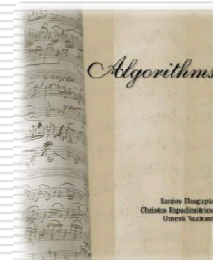
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1



Opening Notes

- 11 Chapter Class (0, 1, ..., 10)
- Will follow book strictly:
 - *Algorithms* by Sanjoy Dasgupta, Christos Papadimitriou, and Umesh Vazirani.
 - ISBN: 978-0-07-352340-8
 - MHID: 0-07-352340-2
 - Amazon: \$31.05 – new
- Will discuss Finance applications throughout the course
- Free Version of Book online!
- <http://www.cs.berkeley.edu/~vazirani/algorithms.html>



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2



More Notes

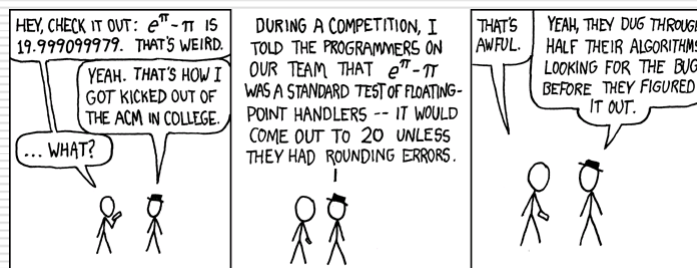
- ❑ Q: "I could just read the book; why should I listen to you?"
- ❑ A:
 - 1.) I will try to go slower and deeper than the book.
 - 2.) The book doesn't have Finance applications.
 - 3.) Pseudocode is fine...but I will show live examples in Perl and VBA (and C++/Matlab if requested?).

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3



Al Khwarizmi



- ❑ Al Khwarizmi wrote *Algoritmi de numero Indorem*. *Algoritmi* is the author's name in the genitive case, and was mistranslated therefore giving birth to today's word

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4



For the classes...

- Bring laptops (preferred) for notes
 - Take notes even though slides **WILL** be posted online
- Try to get the book – I will follow the book and do examples on the board and via slides (that's why you need to take notes)
- * Read the section **before** coming to the class; it will help a lot!

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5



For the classes...

- I will start on time; try not to be late
- The classes will be during common hour on Tuesdays
- I am VERY open to not following the book strictly if there is a highly relevant topic someone wants to discuss
- Email: varun@quantfs.com
- Site: www.quantfs.com

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6



For the classes...

- Financial Applications
 - Matrix Manipulation – Matlab
 - Bond Math Programs
 - Options Pricing Programs
 - BSM, Exotics, Tree Pricing
 - Mean Variance Frontier
 - Term Structure and Credit Risk
- Tricks
 - Normal Distribution Approx, Fast Tricks

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7

