

Class 9, Problem Set 5



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Introduction to Programming and Numerical Analysis

Data project

I am halfway through and it is looking good!

You will have your feedback by the end of the week



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Plan for today

1. Algorithms

- Short intro
- Bisection
- Finding primes

2. Working on PS5



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Algorithms

In a nut shell: A cooking recipe.

1. Preheat the oven
 2. Mix flour, sugar and eggs
 3. Pour into a baking pan
- etc.



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Algorithms

From Wiki:

"an algorithm is a finite sequence of well-defined, computer-implementable instructions, typically to solve a class of problems or to perform a computation. Algorithms are always unambiguous..."



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Algorithms



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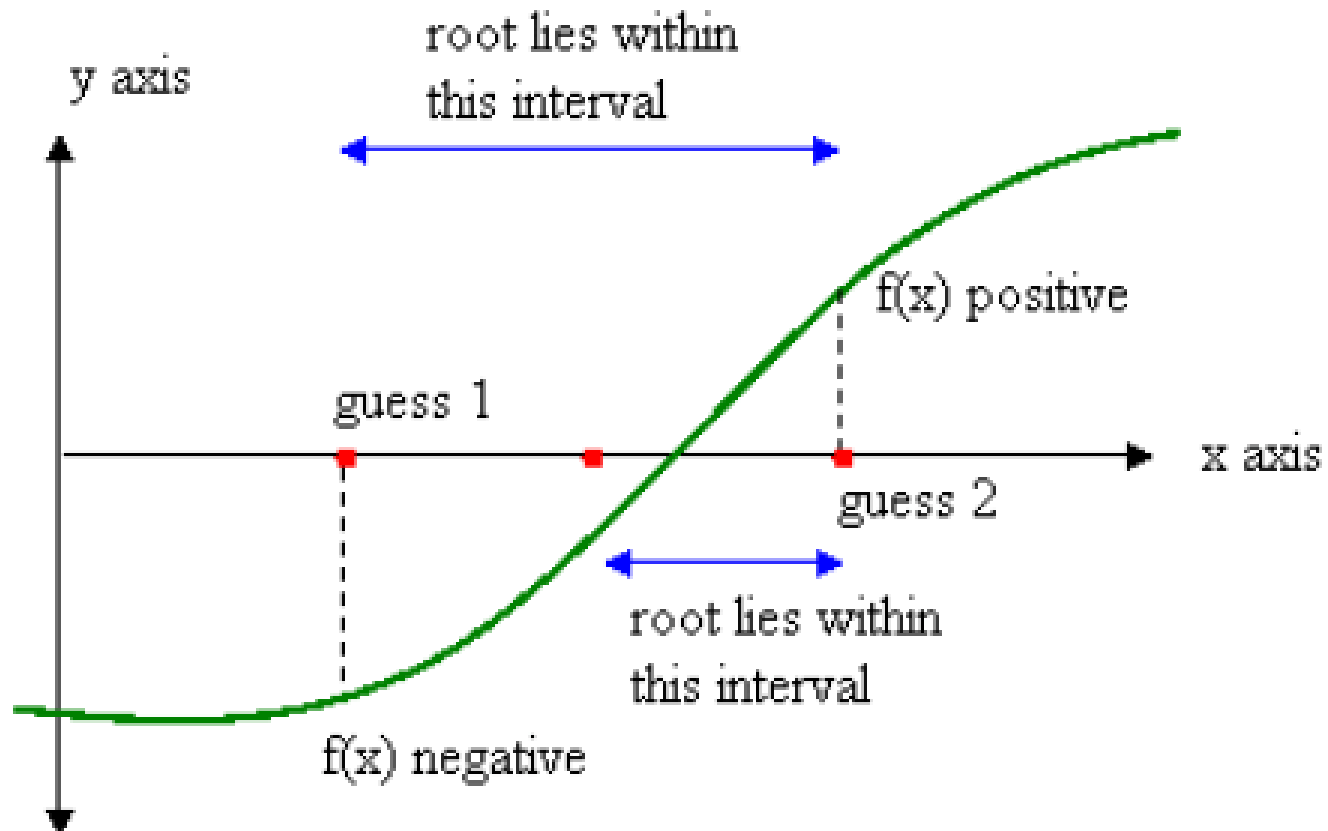
Solving a problem with an algorithmic approach:

- 1. Unambiguous termination criteria*
- 2. Pre-defined inputs*
- 3. Pre-defined outputs*
- 4. Instructions***

Will result in:

- 1. Guaranteed finite runtime*
- 2. Correct result*

Bisection visualized



Finding primes

Watch this [video](#)



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PS5

Let's go!



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