

Slide 2



• Recall problem from last time: Compute and print the roots of a quadratic equation

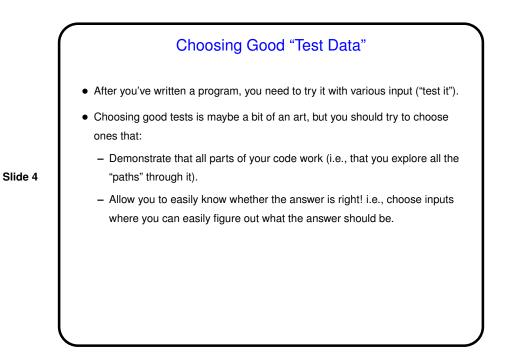
$$ax^2 + bx + c = 0$$

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using the formula

$$\frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

• As noted, a key issue is identifying all the cases that need to be dealt with differently ...



Quotes of the Day/Week/?

• From a key figure in the early days of computing:

"As soon as we started programming, we found to our surprise that it wasn't as easy to get programs right as we had thought. Debugging had to be discovered. I can remember the exact instant when I realized that a large part of my life from then on was going to be spent finding mistakes in my own programs." (Maurice Wilkes: 1948)

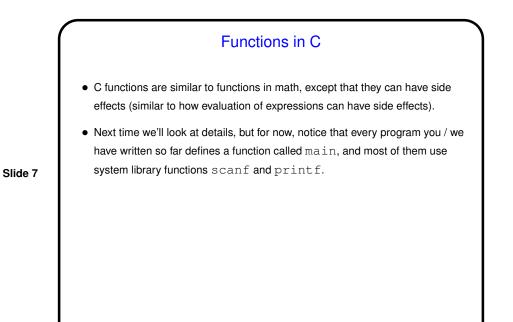
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• From someone in a discussion group for the Java programming language: "Compilers aren't friendly to anybody. They are heartless nitpickers that enjoy telling you about all your mistakes. The best one can do is to satisfy their pedantry to keep them quiet :)"

Functions and Problem Decomposition

- So far all our programs have been one big chunk of code. This is okay for simple programs, but quickly becomes difficult to understand as problems get bigger.
- Further, some things we don't want to, or can't, really write ourselves, such as the code for input/output.
- So C, like many/most other programming languages, gives you a way of decomposing problems into subproblems. C calls them *functions*. Using this feature to good effect is something of an art, but may teach you something about problem decomposition in general, which is a useful skill.

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Minute Essay • Anything noteworthy (interesting, difficult, etc.) about Homework 2?