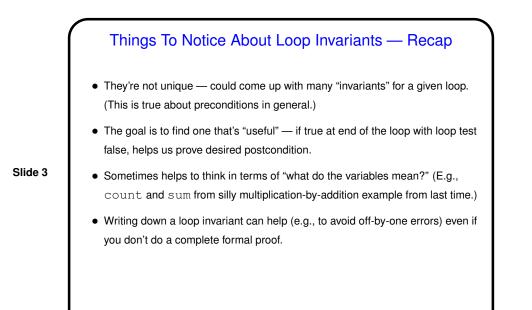
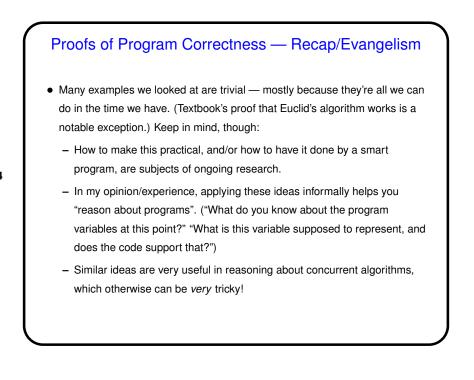
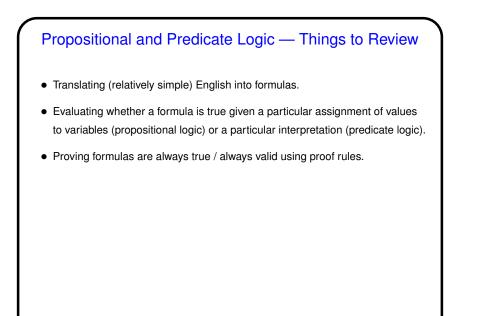


Proving Things About Loops — Example Revisited • Suppose we have while x > 0 do x := x - 1end while with x an integer variable. • Show that after the loop x = 0.

Slide 1





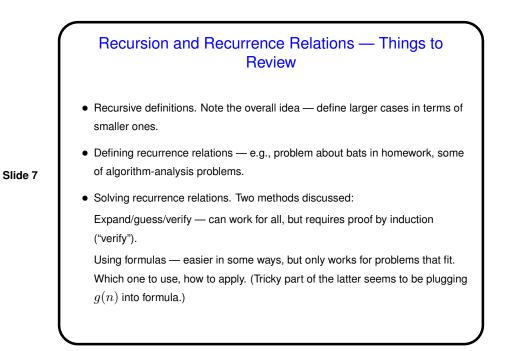


Slide 5

Proof Techniques — Things to Review

- Setting up proof / "proof obligations". Examples in minute essay for February 10.
- Proving something true versus finding a counterexample.

• Proofs by induction. Recall that there are two versions, "first principle" and "second principle". Review last problem-to-turn-in on Homework 3 for example of when the latter is useful.



Analysis of Algorithms — Things to Review General idea — point is to estimate time by counting some sort of basic operations. Defining and solving recurrence relations for recursive algorithms. Focus on the "code" for the algorithm, as described in sample solution for Homework 5.

