CSE 113 A

April 19 - 23, 2010

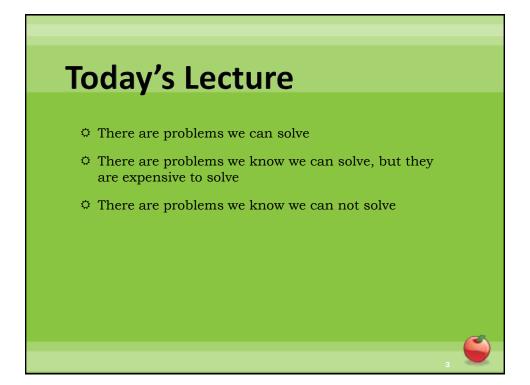
Announcements

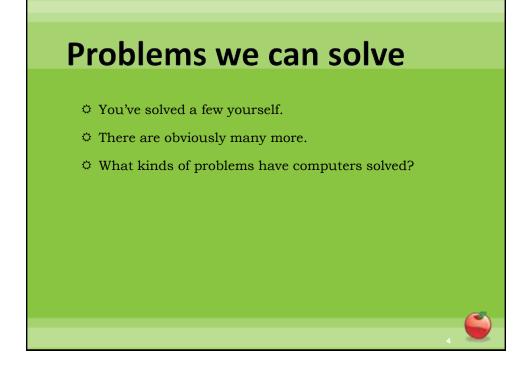
© Exam 4 Review – Wednesday, April 21st

© Exam 4 – Friday, April 23rd

[⇔]Lab 4 due - Sunday, April 25th

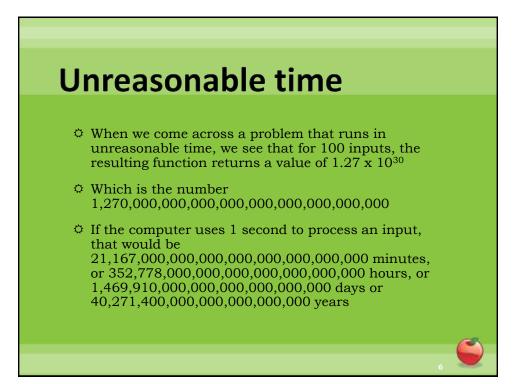
⇔Exam return – Monday, April 26th



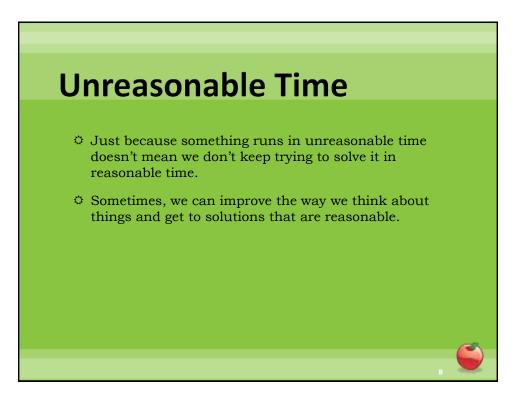


Problems we know we can solve

- These problems have solutions that run in reasonable time
 - O When we discuss this formally, we express the time it takes to find a solution to be a function where the variable is the size of the inputs. The function is expressed in terms of the size of the inputs.
 - For example, a reasonable solution may be expressed in terms n³, so if n = 100, then when we cube it, we get 100,000

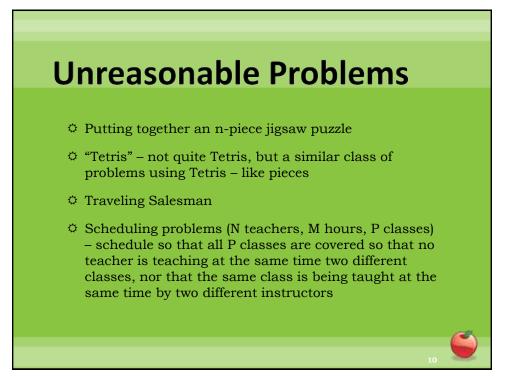


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A "Hard" Problem

- Example: Computer player for chess. The estimate for the total number of board configurations for chess is somewhere in between the values we mentioned on the previous slide (10⁵⁰).
- Therefore, for the computer player to know how to win, it needs to know each of those board configurations and how to win if the board is in that configuration.
- Well, sort of there are shortcuts to this, which is how we got a computer that is able to play chess.



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Some unanswered questions

A currently un-answered (and potentially neveranswered) question is whether or not there are reasonably-timed solutions to our currently known unreasonably-timed solution problems. We know that sometimes we can find reasonable solutions, but can we find general-case reasonably-timed solutions?

