



CS 416

Artificial Intelligence

Lecture 4

Uninformed Searches (cont)



Chess

Kasparov won the first chess game



Cost of Breadth-first Search (BFS)

- b – max branching factor (infinite?)
- d – depth to shallowest goal node
- m – max length of any path (infinite?)
- Analysis of space and time performance...
 - see example on blackboard
 - big O ($= O(f(n))$) is the asymptotic upper bound
 - means that there are positive constants c and n_0 such that:
 - $0 \leq f(n) \leq cn$ for all $n \geq n_0$
 - Read algorithms textbook if this is new to you