

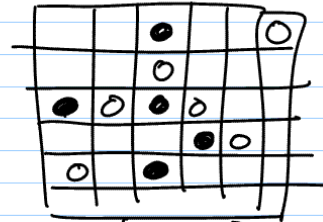
iterative deepening
 : depth first w/depth bound
 as each pass finishes,
 ↑ band

need way to estimate
 value of nodes at depth
 band



use heuristic
 chess: # attacked squares
 point value

Konane



check # of moves?
 # of pieces that can move?

depth first alg will get
 bogged down here

Negamax: + values are good for current player
 now all nodes are MAX nodes
 switch α, β at each level

must be zero-sum:
 value for current player
 ||
 -value for other player

Negascout (or maybe just "Scout")

idea: try to prune aggressively

assume 1st move is good, set (α, β) for next moves
 so they are likely to be

↓
 apply heuristic
 or use results of
 previous iterations of
 iterative deepening

pruned
 (if wrong, we'll know and
 can use real (α, β) values)

MAX nodes

$b = \beta$

for children c of node n

$a = \text{negascout}(c, \alpha, b)$

$\alpha = \max(\alpha, a)$

if $(\alpha \geq \beta)$ return a

if $(a \geq b)$ $\alpha = \text{negascout}(c, \alpha, \beta)$

if $(\alpha \geq \beta)$ return α

return α

