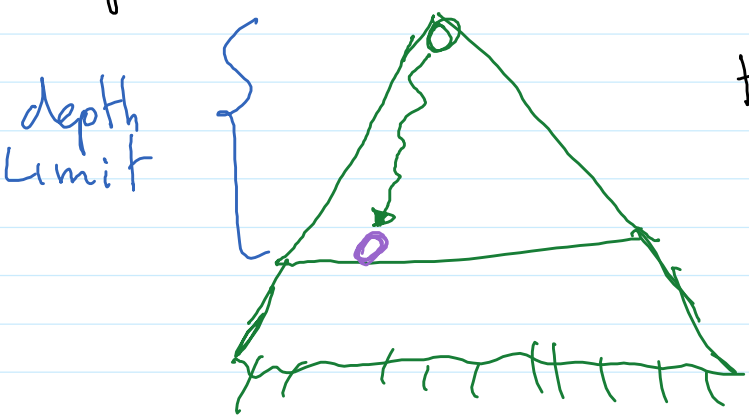
DL-Minimax

Friday, April 3, 2020 2:29 AM

Depth-Limited Minimax



Heuristic function.
value

Hvalue(s: state)
↳ approx of the minimax value of s

```
(* Depth Limited Minimax *)

PROCEDURE maxChoice( s0 : state, depth : INT )
  FOREVERY a in actions(s0) :
    besta := a that maximizes minValue( result( s0, a ), depth )
  RETURN besta;

PROCEDURE minValue( s : state, d : INT )
  IF term( s ) THEN RETURN utility( s )
  IF depth = 0 THEN RETURN Hvalue( s )
  v := ∞
  FOREACH a in actions( s ) DO
    v := MIN( v, maxValue( result( s, a), d-1 ) )
  RETURN v

PROCEDURE maxValue( s : state )
  IF term( s ) THEN RETURN utility( s )
  IF depth = 0 THEN RETURN Hvalue( s )
  v := -∞
  FOREACH a in actions( s ) DO
    v := MAX( v, minValue( result( s, a), d-1 ) )
  RETURN v
```

maxChoice(s0, N)