

My turn:

```
minimax(s,game,depth):  
  if game.terminal(s) or depth=0  
  then game.f(s)  
  else  
    val = game.minval  
    foreach a ∈ game.actions(s)  
      val' = maximin(game.child(a,s),  
                     game,depth-1)  
      if val' > val then  
        val = val'  
        besta = a  
  return val
```

Opponent's turn:

```
maximin(s,game,depth):  
  if game.terminal(s) or depth=0  
  then game.f(s)  
  else  
    val = game.maxval  
    foreach a ∈ game.actions(s)  
      val' = minimax(game.child(a,s),  
                     game,depth-1)  
      if val' < val then  
        val = val'  
        besta = a  
  return val
```

Initial call:

```
minimax(initialstate,game,maxdepth)
```

My turn:

```
minimaxAB(s,game,depth,a,b):  
  if game.terminal(s) or depth=0  
  then game.f(s)  
  else  
    val = game.minval  
    foreach op ∈ game.actions(s)  
      val' = maximinAB(game.child(op,s),  
                        game,depth-1,max(a,val),b)  
      if val' ≥ b then return val  
      if val' > val then  
        val = val'  
        bestaction = op  
  return val
```

Opponent's turn:

```
maximinAB(s,game,depth,a,b):  
  if game.terminal(s) or depth=0  
  then game.f(s)  
  else  
    val = game.maxval  
    foreach op ∈ game.actions(s)  
      val' = minimaxAB(game.child(op,s),  
                       game,depth-1,a,min(b,val))  
      if val' ≤ a then return val  
      if val' < val then  
        val = val'  
        besta = op  
  return val
```

Initial call:

```
minimax(initialstate,game,maxdepth,  
        game.minval,game.maxval)
```