

Seed 11

randint(0, 10)

Alpha Beta  
Example #1

7

Max: value, alpha beta

-I -I +I

7

Min: v, a, ⑤  
+I -I +I

Min: v, a, ⑥  
+I 7 +I

7

Max: v, ⑦ b  
-I -I +I

Max: v, a, b  
-I 7 +I

Max: v, ⑧ b  
-I 7 +I

Max: v, ⑨ b  
-I -I +I

7

8 Prune

7

2

Min: v, a, ⑤  
+I -I +I

Min: v, a, ⑥  
+I 7 +I

Min: v, a, ⑦  
+I -I 7

Min: v, a, b  
+I

Min: v, a, ⑧  
+I 7 +I

Min: v, a, ⑨  
+I 7 +I

Min: v, a, ⑩  
+I 7 +I

Min: v, a, ⑪  
+I 7 +I

7

8 Prune

7 8 9 3 2

8 7 10 9

2 1 Prune

7 4 Prune

Alpha Beta  
#2

random seed 14

rand int 1 to 50

34

Max: value, alpha, beta  
 $\begin{array}{c} -I \\ 34 \end{array}$      $\begin{array}{c} -I \\ 34 \end{array}$      $\begin{array}{c} +I \\ \end{array}$

34

Min: v, a, b  
 $\begin{array}{c} +I \\ 45 \end{array}$      $\begin{array}{c} -I \\ 45 \end{array}$      $\begin{array}{c} +I \\ 34 \end{array}$   
 45    45    34

45

34

19

Min: v, a, b  
 $\begin{array}{c} +I \\ 19 \end{array}$      $\begin{array}{c} 34 \\ 19 \end{array}$      $\begin{array}{c} +I \\ 19 \end{array}$

19

prune

Max: v, a, b  
 $\begin{array}{c} -I \\ 7 \end{array}$      $\begin{array}{c} -I \\ 7 \end{array}$      $\begin{array}{c} +I \\ 45 \end{array}$   
 7    7    45

7

Max: v, a, b  
 $\begin{array}{c} -I \\ 34 \end{array}$      $\begin{array}{c} -I \\ 34 \end{array}$      $\begin{array}{c} 45 \\ \end{array}$

34

16

Max: v, a, b  
 $\begin{array}{c} -I \\ 17 \end{array}$      $\begin{array}{c} 34 \\ 19 \end{array}$      $\begin{array}{c} +I \\ \end{array}$   
 17    19

17

Max: v, a, b

7

Min: v, a, b  
 $\begin{array}{c} -I \\ 7 \end{array}$      $\begin{array}{c} +I \\ 45 \end{array}$      $\begin{array}{c} -I \\ 7 \end{array}$

7

45

Min: v, a, b  
 $\begin{array}{c} +I \\ 42 \end{array}$      $\begin{array}{c} -I \\ 42 \end{array}$      $\begin{array}{c} 45 \\ \end{array}$

42

34

Min: v, a, b  
 $\begin{array}{c} +I \\ 16 \end{array}$      $\begin{array}{c} 34 \\ 16 \end{array}$      $\begin{array}{c} 45 \\ \end{array}$

16

18

Min: v, a, b  
 $\begin{array}{c} +I \\ 17 \end{array}$      $\begin{array}{c} 34 \\ 17 \end{array}$      $\begin{array}{c} +I \\ 17 \end{array}$

48

17

19

Min: v, a, b    Min: v, a, b

5

43

29

20

prune