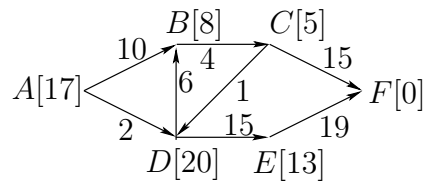


A^* algoritmus

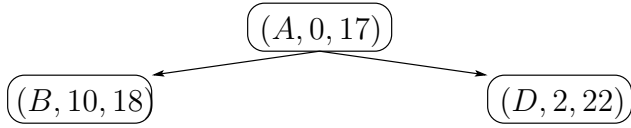
```
 $g'(s) := 0$   
 $p(s) := \text{nil}$   
 $N := \{s\}$   
 $Z := \emptyset$   
while  $N \neq \emptyset$  do  
   $n := \operatorname{argmin}_{x \in N} f'(x)$   
  { $n$  az  $f' = g' + h'$  egy minimumhelye az  $N$  halmazon}  
  if  $n$  célállapot then  
    return  $p$   
    { $p$  alapján rekonstruálható a megtalált minimális út}  
   $N := N \setminus \{n\}$   
   $Z := Z \cup \{n\}$   
  for  $n$  minden egyes  $n'$  szomszédjára do  
    if  $n' \notin (N \cup Z)$  or  $g'(n) + \text{KTG}(n, n') < g'(n')$  then  
       $g'(n') := g'(n) + \text{KTG}(n, n')$   
       $p(n') := n$   
       $N := N \cup \{n'\}$   
       $Z := Z \setminus \{n'\}$   
write ('Nincs megoldás')
```

Példa: Keresd meg a legrövidebb utat A -ból F -be az A^* algoritmus segítségével!

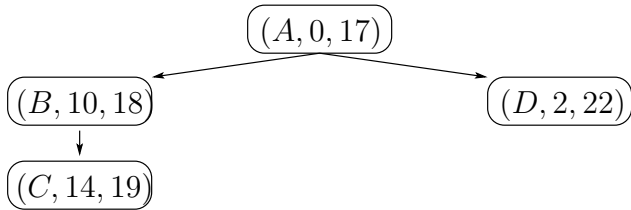


(A, 0, 17)

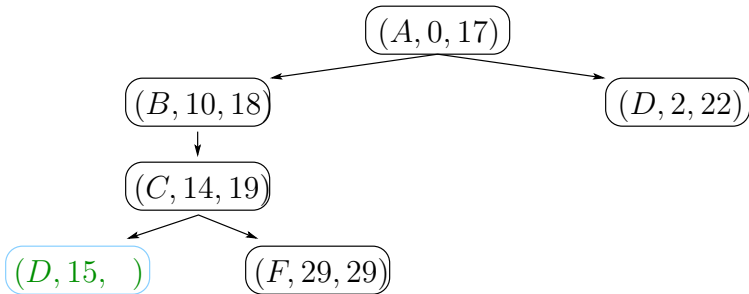
N	Z
A(nil,0,17)	



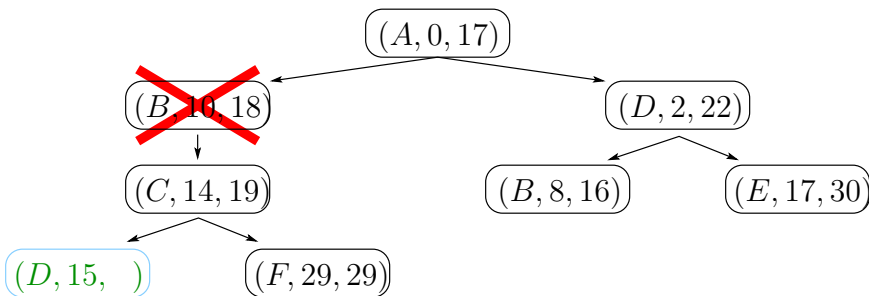
N	Z
B(A, 10, 18)	A(nil,0,17)
D(A, 2, 22)	



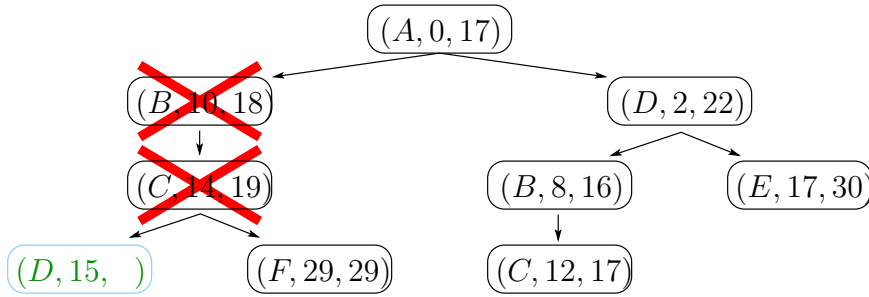
N	Z
D(A, 2, 22)	A(nil,0,17)
C(B, 14, 19)	B(A, 10, 18)



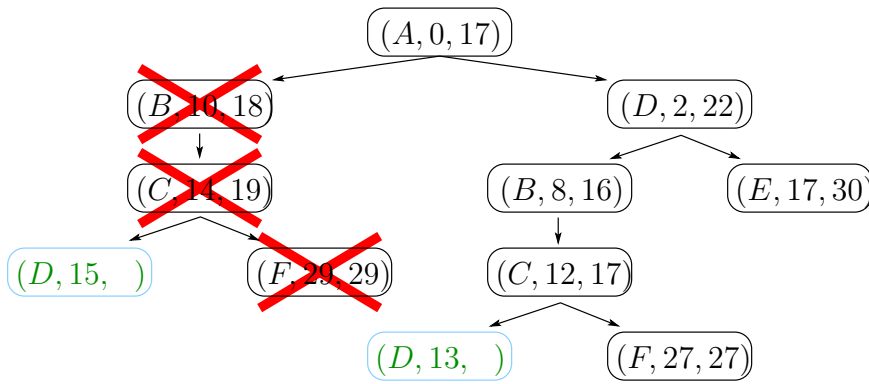
N	Z
D(A, 2, 22)	A(nil,0,17)
F(C, 29, 29)	B(A, 10, 18), C(B, 14, 19)



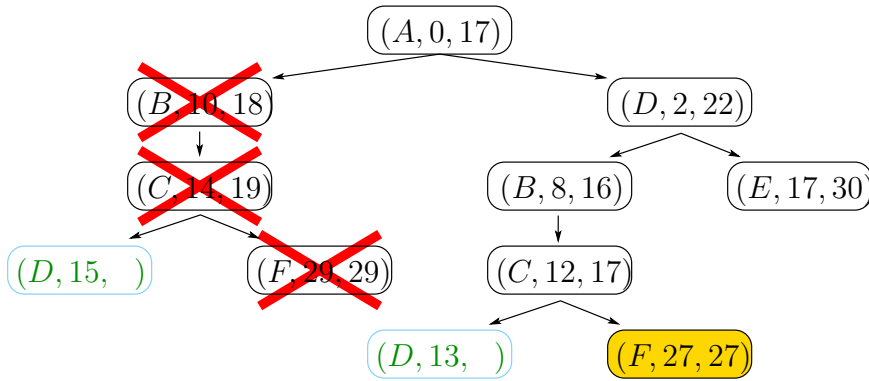
N	Z
F(C, 29, 29)	A(nil,0,17)
B(D, 8, 16)	C(B, 14, 19)
E(D, 17, 30)	D(A, 2, 22)



<i>N</i>	<i>Z</i>
$F(C, 29, 29)$	$A(\text{nil}, 0, 17)$
$E(D, 17, 30)$	$D(A, 2, 22)$
$C(B, 12, 17)$	$B(D, 8, 16)$



<i>N</i>	<i>Z</i>
$E(D, 17, 30)$	$A(\text{nil}, 0, 17)$
$F(C, 27, 27)$	$D(A, 2, 22)$
	$B(D, 8, 16)$
	$C(B, 12, 17)$



<i>N</i>	<i>Z</i>
$E(D, 17, 30)$	$A(\text{nil}, 0, 17)$
	$D(A, 2, 22)$
	$B(D, 8, 16)$
	$C(B, 12, 17)$
	$F(C, 27, 27)$