

easy instances from 1 to 10 moves: (0s are empty blocks)

{ 1,2,3,0,7,6,5,4,8 }  
{ 0,4,1,2,5,3,7,8,6 }  
{ 4,1,3,0,2,6,7,5,8 }  
{ 1,2,3,0,4,8,7,6,5 }  
{ 1,2,0,4,8,3,7,6,5 }  
{ 1,0,2,4,6,3,7,5,8 }  
{ 0,1,2,4,5,3,7,8,6 }  
{ 1,2,3,0,4,5,7,8,6 }  
{ 1,2,3,4,0,5,7,8,6 }  
{ 1,2,3,4,5,0,7,8,6 }  
{ 0,1,3,4,2,5,7,8,6 }  
{ 2,3,5,1,0,4,7,8,6 }  
{ 1,6,2,5,3,0,4,7,8 }  
{ 1,8,2,0,4,3,7,6,5 }  
{ 2,5,3,4,1,6,0,7,8 }  
{ 1,2,3,4,6,8,7,5,0 }  
{ 1,6,2,5,7,3,0,4,8 }  
{ 0,4,1,5,3,2,7,8,6 }  
{ 0,5,2,1,8,3,4,7,6 }  
{ 1,2,3,0,4,6,7,5,8 }

//medium instances from 11 to 20 moves

{ 1,3,5,7,2,6,8,0,4 }  
{ 4,1,2,3,0,6,5,7,8 }  
{ 4,3,1,0,7,2,8,5,6 }  
{ 5,2,1,4,8,3,7,6,0 }  
{ 2,0,8,1,3,5,4,6,7 }  
{ 3,5,6,1,4,8,0,7,2 }  
{ 1,0,2,7,5,4,8,6,3 }  
{ 5,1,8,2,7,3,4,0,6 }  
{ 4,3,0,6,1,8,2,7,5 }  
{ 2,4,3,1,6,5,8,0,7 }  
{ 1,2,3,6,4,5,7,8,0 }  
{ 3,1,2,4,5,6,7,8,0 }  
{ 1,2,3,4,8,7,6,5,0 }  
{ 1,3,2,5,4,6,7,8,0 }  
{ 1,4,2,6,5,8,7,3,0 }

//hard instances from 21 to 32

{ 2,1,3,4,5,6,8,7,0 }  
{ 2,3,1,6,5,4,8,7,0 }

{ 2,3,1,6,4,5,7,8,0 }  
{ 1,2,3,6,5,4,8,7,0 }  
{ 1,2,3,6,5,4,0,8,7 }  
{ 4,5,3,2,8,0,6,7,1 }  
{ 4,5,3,2,1,0,8,7,6 }  
{ 1,2,4,3,5,0,8,7,6 }  
{ 1,2,4,3,5,8,7,0,6 }  
{ 2,1,3,4,5,8,7,0,6 }  
{ 1,3,5,8,7,0,6,2,4 }  
{ 4,3,1,6,5,8,0,2,7 }  
{ 7,0,4,8,5,1,6,3,2 }  
{ 8,7,2,1,5,0,4,6,3 }  
{ 8,3,5,6,4,2,1,0,7 }  
{ 1,6,4,0,3,5,8,2,7 }  
{ 6,3,8,5,4,1,7,2,0 }  
{ 5,8,7,1,4,6,3,0,2 }  
{ 2,8,5,3,6,1,7,0,4 }  
{ 8,7,6,5,4,3,2,1,0 }