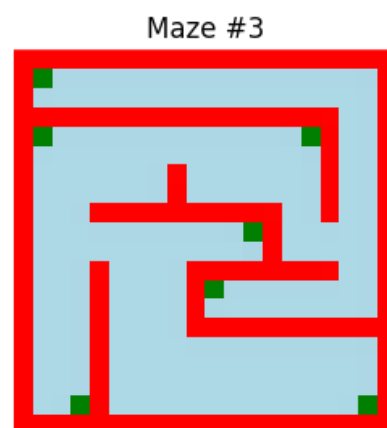
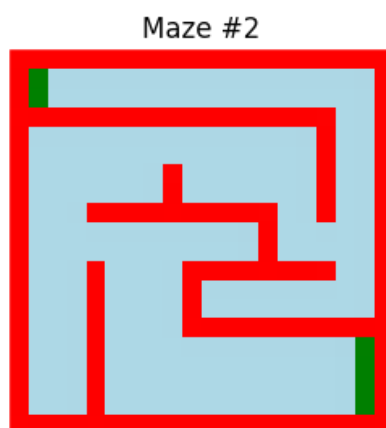
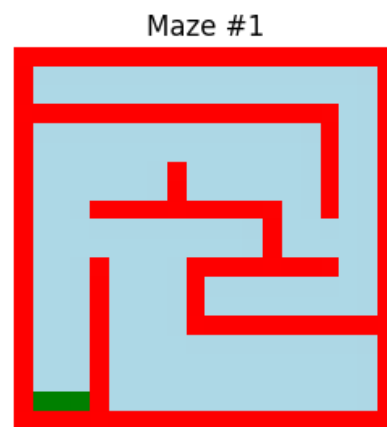
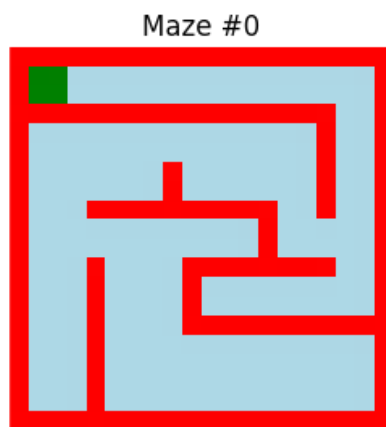


H13.1 (a) Plot Mazes



H13.1 (b) Transition model

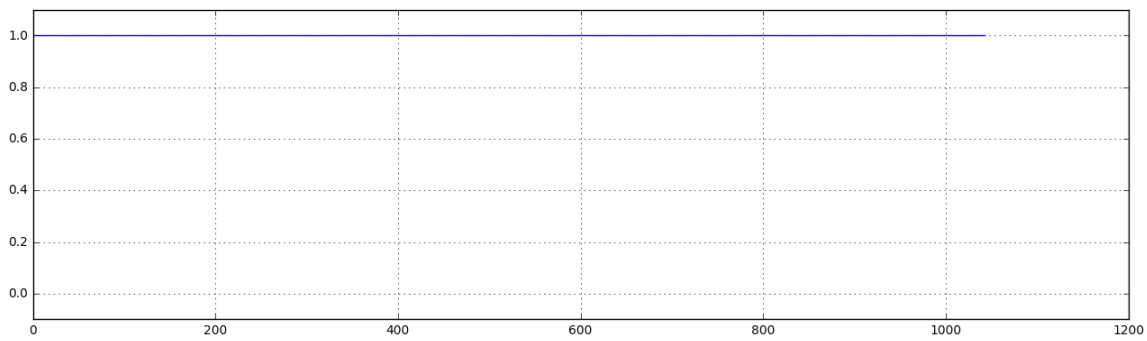
State:

- 0 = Reward
- 1 = Unrewarded
- 2 = Not accessible

Actions:

- 1 = Move right
- 2 = Move down
- 3 = Move left
- 4 = Move up

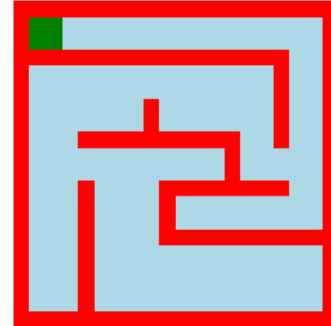
<function plot at 0x00000198A52E4AE8>



Possible steps for each field

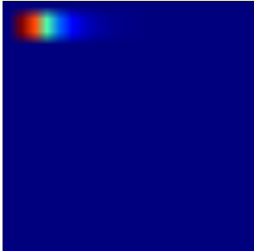


Original maze

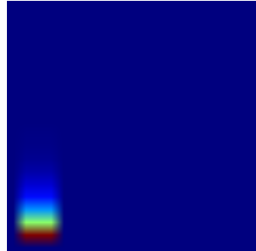


H13.1 (c) Policy evaluation

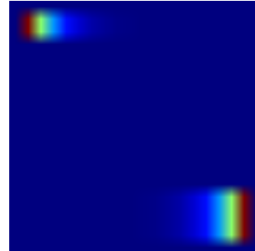
Analytical value #1



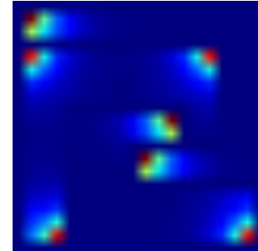
Analytical value #2



Analytical value #3

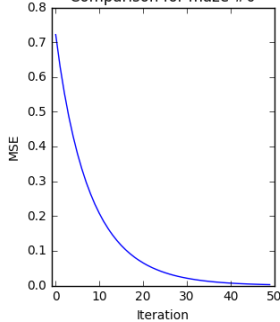


Analytical value #4

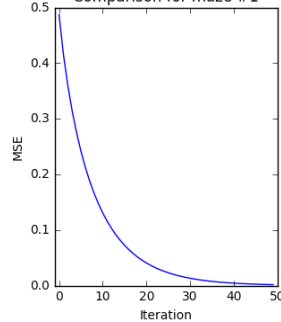


H13.1 (d) Bellman - Value iteration

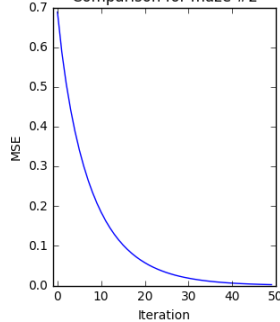
Comparison for maze #0



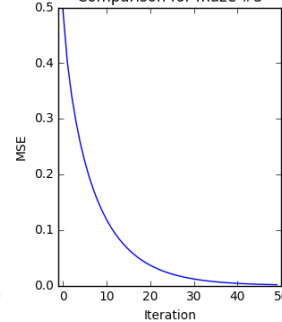
Comparison for maze #1



Comparison for maze #2

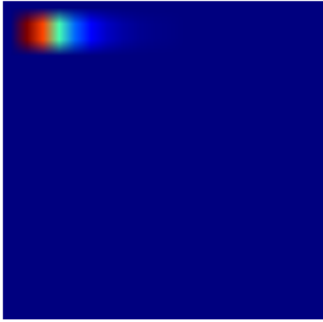


Comparison for maze #3

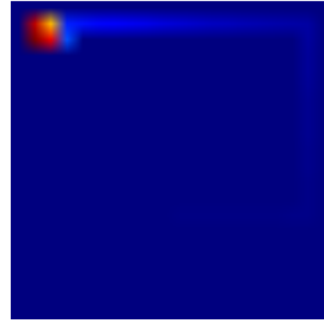


H13.2 (a) Indicated policy

Analytical value #5 (Simple)



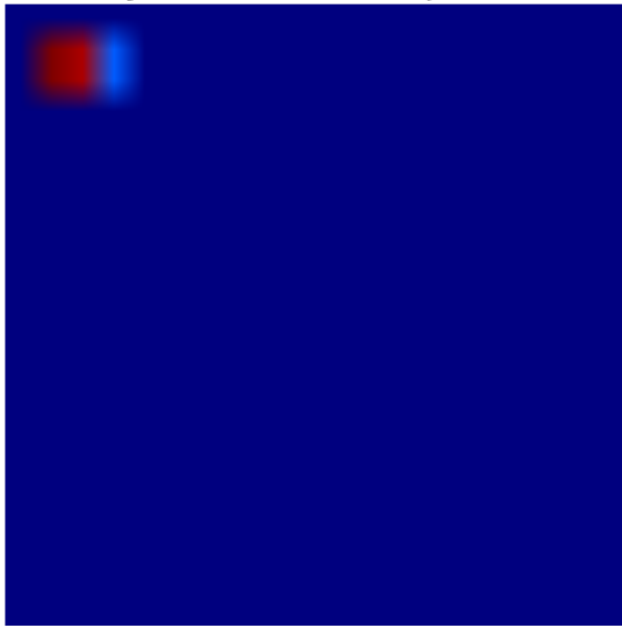
Analytical value #5 (Indicated)



H13.2 (b) Find optimal policy

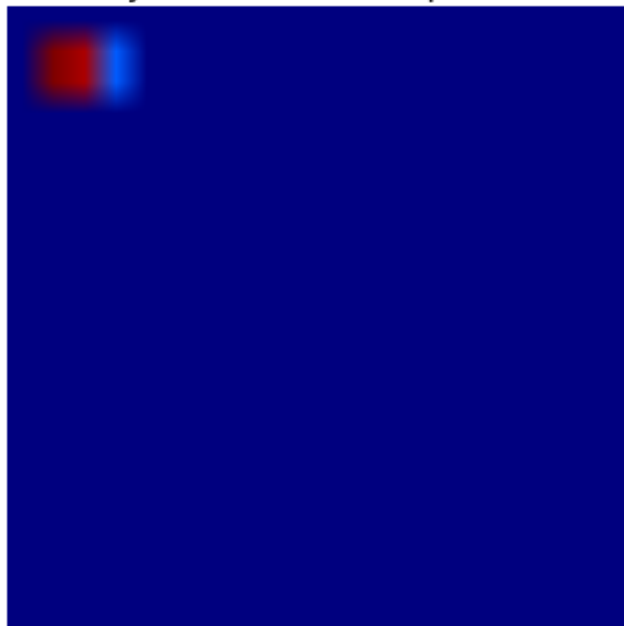
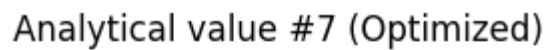
```
#####
#XX<<<<<<<<<<<<<<<<^#
#XX<<<<<<<<<<<<<<<<^#
#####^#
#>>>>>>>>>>>>>>v#^#
#>>>>>>>>>>>>>>v#^#
#^^^#>>>>>>>>>>>>v#^#
#^^^#>>>>>>>>>>>>v#^#
#^^#####v#^#
#^^<<<<<<<<<<<<<<<<#>>>>^#
#^^<<<<<<<<<<<<<<<<#>>>>^#
#^^#<<<<<<<<<<<<<<<<#>>>>^#
#^^#<<<<<<<<<<<<<<<<#>>>>^#
#^^#<<<<<<<<<<<<<<<<#>>>>^#
#^^#<<<<<<<<<<<<<<<<#>>>>^#
#^^#<<<<<<<<<<<<<<<<#>>>>^#
#^^#<<<<<<<<<<<<<<<<#>>>>^#
#^^#<<<<<<<<<<<<<<<<#>>>>^#
#^^#<<<<<<<<<<<<<<<<#>>>>^#
#####
```

Analytical value #6 (Optimized)



H13.2 (c) Another optimal policy

```
#####  
#XX<<<<<<<<<<<<<<<<#  
#XX<<<<<<<<<<<<<<<<#  
#####^<#  
#VVVVVVVVVVVVVVVVV^<#  
#>>>>>>>VVVVVVVVV^<#  
#>>>>>>^#VVVVVVVVV^<#  
#>>>>>>^#>>>>>>V#^<#  
#>>^#####>V#^<#  
#>>^<<<<<<<<<<#>>>^<#  
#>>^#####^#^^^<#  
#>>^#^^^######^<#  
#>>^#^^^#>>>>>>^<#  
#>>^#^^^#^^^#####<#  
#>>^#^^^#####  
#>>^#^^^<<<<<<<<<<#  
#>>^#^^^#####^#  
#>>^#^^^#####^#  
#>>^#^^^#####^#  
#####
```



H13.2 (d) Optimal Policy = Uniform Policy