

Quiz_1

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4-Queens Quiz

Col-by-Col , row selection order

$h=4-c$, where c is number
queens in non-attacking
positions

$$H=4-c =4-1=3$$

Q			

Q			

Q			

Q			

Queue at the end of this exploration

2
2
3
3
3
4
4

$$H=4-c =4-2=2$$

Q			
	Q		

$$H=4-c =4-2=2$$

Q			
	Q		

$$H=4-0 =4-0=4$$

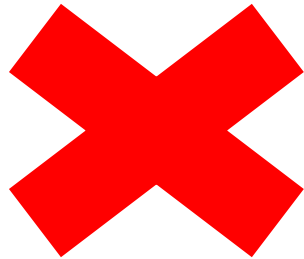
Q	Q		

$$H=4-0 =4-0=4$$

Q			
	Q		

Queue at the end of this exploration

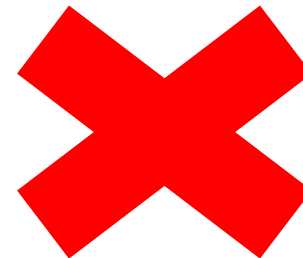
Q			
	Q		



Q			
	Q		

$$H=4-c=4-3=1$$

Q			
		Q	
	Q		



3
3
3
4
4

$$H=4-c=4-2=2$$

Q			
	Q		

Q			

Queue at the end of this exploration

1
3
3
4
4
4
4

$$H=4-c=4-3=1$$

		Q	
Q			
	Q		

$$H=4-c=4-0=4$$

Q			
	Q	Q	

$$H=4-c=4-0=4$$

Q			
		Q	
	Q		

$$H=4-c=4-0=4$$

Q		Q	
	Q		

		Q	
Q			
	Q		

		Q	
Q			
			Q
	Q		

4-Queens

Alternate row-by-row , column selection order

$$H=4-c =4-1=3$$

Q			

Queue at the end of this exploration

2
2
3
3
3
4
4

$$H=4-c =4-2=2$$

Q			
		Q	

$$H=4-c =4-2=2$$

Q			
			Q

$$H=4-0 =4-0=4$$

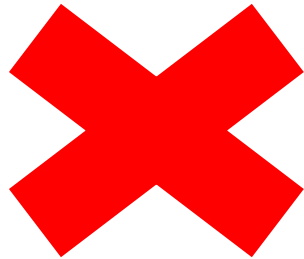
Q			
	Q		

$$H=4-0 =4-0=4$$

Q			
Q			

Queue at the end of this exploration

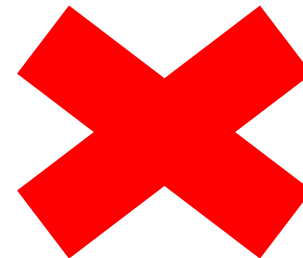
Q			
		Q	



Q			
			Q

$$H=4-c=4-3=1$$

Q			
			Q
	Q		



3
3
3
4
4

$$H=4-c=4-2=2$$

	Q		
			Q

	Q		

Queue at the end of this exploration

1
3
3
4
4
4
4

$$H=4-c=4-3=1$$

	Q		
			Q
Q			

$$H=4-0=4-0=4$$

	Q		
			Q
			Q

$$H=4-0=4-0=4$$

	Q		
			Q
		Q	

$$H=4-0=4-0=4$$

	Q		
			Q
	Q		

	Q		
			Q
Q			

	Q		
			Q
Q			
		Q	

Goal State

Q			

Q			

Q			

Q			

Q			
	Q		

Q			
	Q		

Q			
	Q		

	Q		
Q			

	Q		
Q			

	Q		
Q			

Q			
	Q		

Q			
	Q		

Q			
	Q		

	Q		
Q			

	Q		
Q			

	Q		
Q			

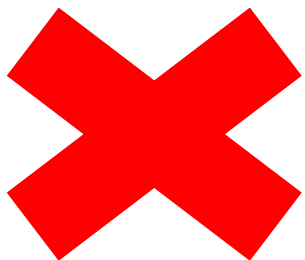
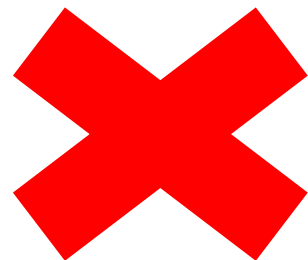


Q			
		Q	
	Q		

		Q	
Q			
	Q		

	Q		
Q			
		Q	

	Q		
		Q	
Q			



		Q	
Q			
			Q
	Q		

Answer: BFS: 16 States

Answer: DFS?