

Walkthrough for Eighth Day of Christmas

The Maids are in a chain so they are on either the grey or the white squares below. C2 and B4 are different colours so the condition in D3 is always false and

E1 is the Pond

There are 11 available grey squares and 10 available white squares so both are possible, moreover both are possible without going round the pond e.g. as below:

Black 6	White 6	Black 7	White 5	Black 8
White 7	Black 3	White 3	Black 2	<u>White 4</u>
Black 5	White 2			<u>Black 1</u>
White 8	<u>Black 4</u>			
	<u>White 1</u>			

If the cycle is on grey squares then it must include both D2 or C5, whether it goes round the pond or not. Similarly if the cycle is on white squares it must include both E2 and B5.

So the condition in E1 is always true and

A2 is a Swan

This has used one of the white squares so if the cycle is on white squares it must go round the pond, through D4.

So the condition on A2 is always false and

A4 and B1 are Swans

This only leaves 7 white squares so we know that the cycle must be on the grey squares so

D2 and C3 are Maids

	Swan (1)		Swan (2)	
Swan (2)				
				Maid (3)
	Maid (3)			

Now we are told that B2 or B4 is a Goose. This means that the cycle must go round the pond so

E3 is a Maid

Also, if B2 is a Goose then the cycle will need to go round via A1 and A3, while if B4 is a Goose it would need to go via A5 and A3 so

A3 is a Maid

We are told that if B4 is not a Swan then B2 is a Goose. We already know from C5 that one of B2 and B4 is a Goose which implies that if B4 is a Swan then B2 is a Goose so

B2 is a Goose

And then

A1 and C1 are Maids

Now we are told that 2 Geese cannot be a step apart so

C2 and B3 are Swans

Maid (4)	Swan	Maid (2)	Swan	
Swan	Goose (3)	Swan (5)		
Maid (4)	Swan (5)			Maid
	Maid			
		Maid (1)		

We now have 2 Maids, 2 Swans and 5 Geese left to place. One of the Maids must be in B4 or A5, the other in D4 or E5.

In the bottom right hand corner area, the 3 squares that are not the Maid cannot all be Geese, so there must be at least one Swan in the bottom right corner area. In the top right hand corner area, the 2 squares that are not the Maid cannot both be Geese, so there must be at least one Swan in the top right area. So there has to be one Swan in each of these areas and

D1, E2, E4 and D5 are Geese

Now we are told that 2 Swans cannot be a step apart so

B5 is a Swan

Finally we are told that only 1 Maid is not on the edge which gives

A5 and E5 are Maids

So

B4 is a Goose and D4 is a Swan

Maid	Swan	Maid	Swan	Maid (3)
Swan	Goose	Swan	Goose (4)	Swan (2)
Maid	Swan			Maid
Goose (1)	Maid		Swan (4)	Goose (1)
	Goose (1)	Maid	Goose (1)	Maid (3)