

# Snake Game!

A real-life game of classic Snake

# Classic Nokia Snake



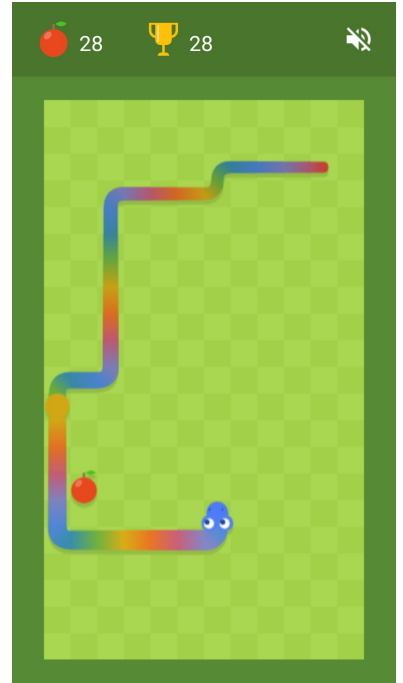
You control the snake on the screen with arrow keys.

Everytime the snake eats the "fruit", it gets longer by one square.

# How it works

You will be put in groups of 10 and each group will be joined some tutors

You will take it in turns to direct the snake (played by your tutors) to the fruit. When the snake reaches the fruit, it will grow by one tutor.



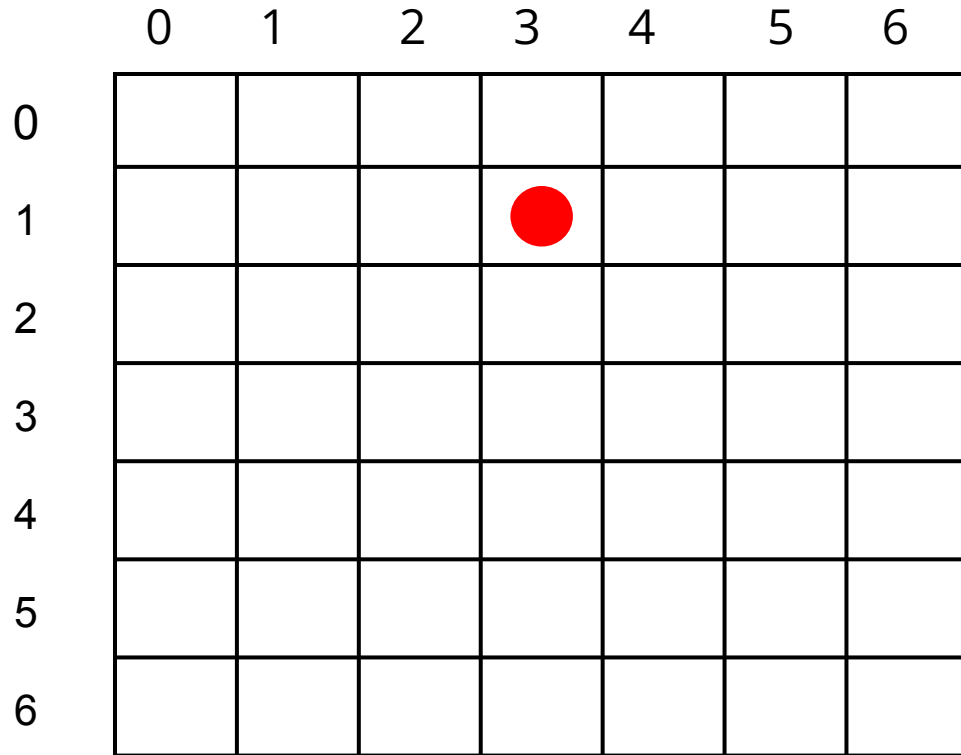
# How it works

	0	1	2	3	4	5	6
0							
1							
2							
3							
4							
5							
6							

On the ground, you'll see a grid like this one.

It has 7 rows and 7 columns

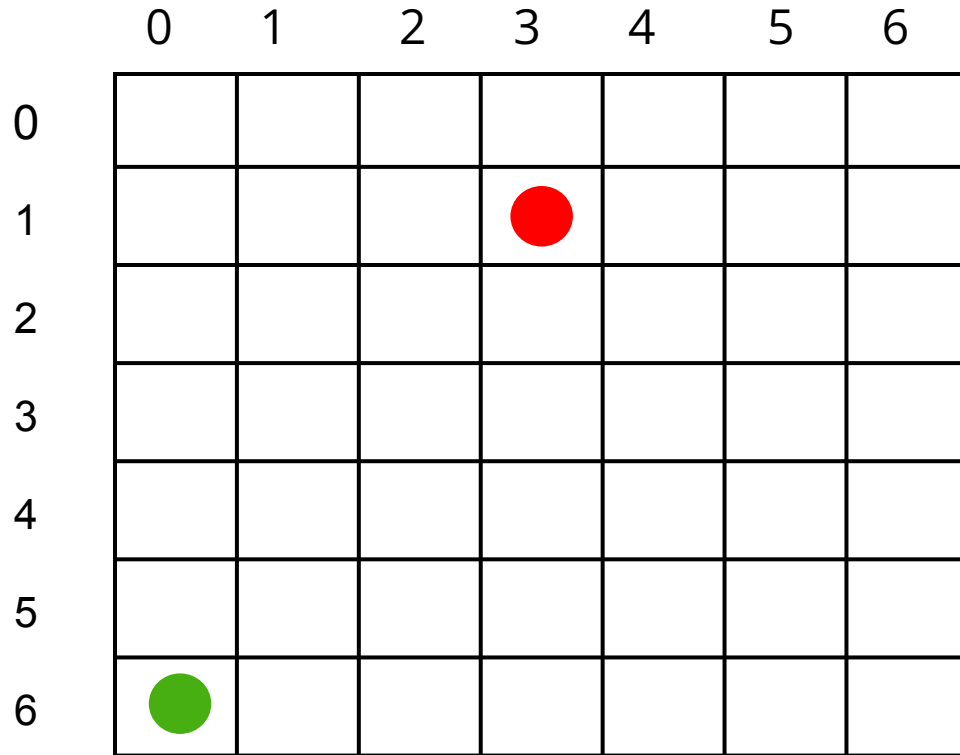
# How it works



You will get a sheet of paper with coordinates on it encoded in binary form. We've decoded one and it's (3,1)

That is where the fruit should be.

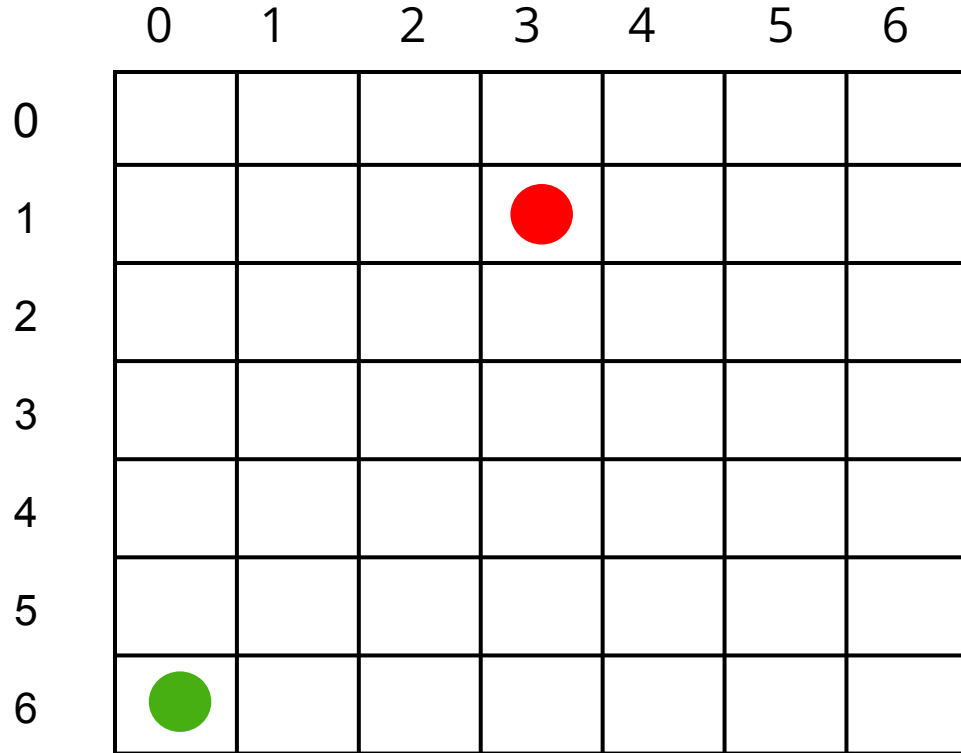
# How it works



The green dot is where a tutor will stand at the start to be the snake.

In the background, there will be a beat playing. The snake will move forward one square on each beat.

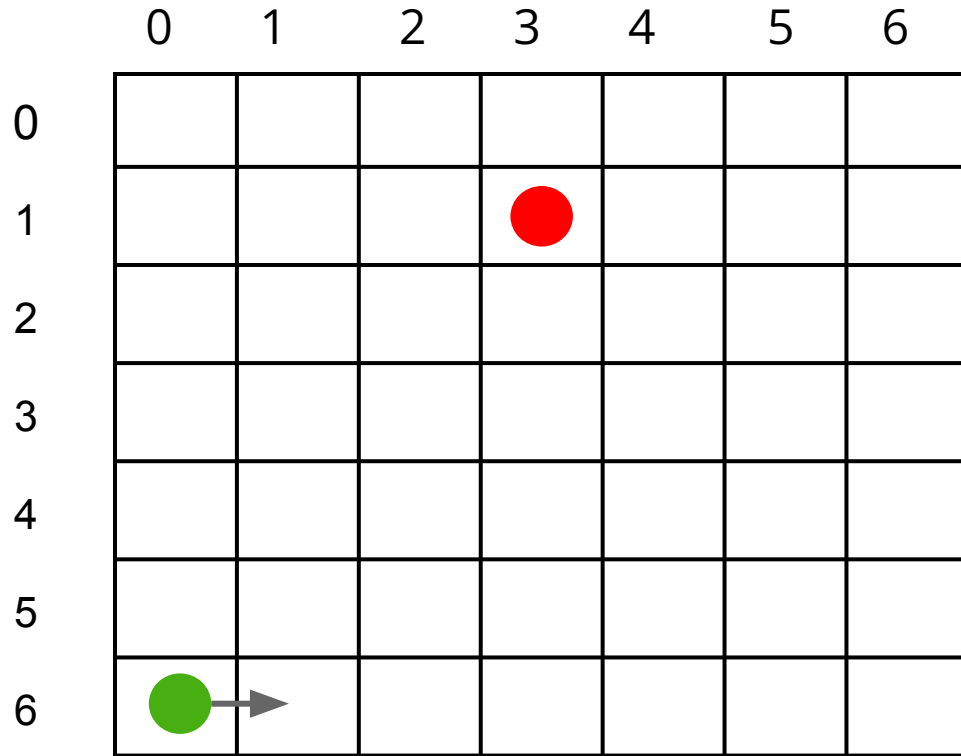
# How it works



You can give the snake instructions to *turn left* or *turn right* to direct it to the apple.

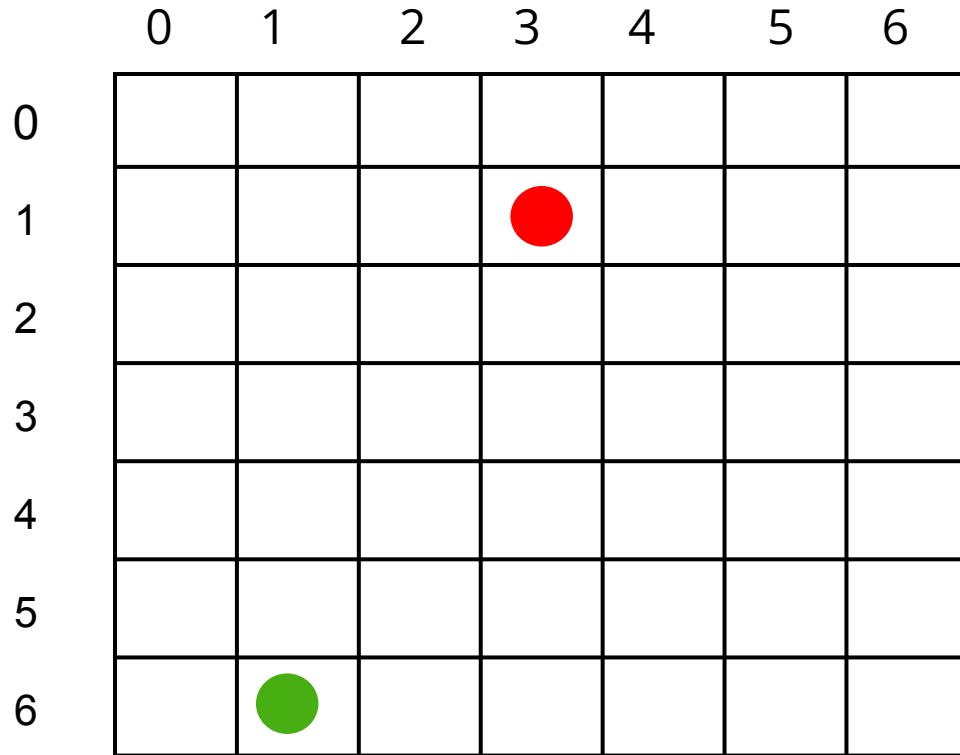
If there are no directions given, the snake will move *forward*.

# Beat No...1

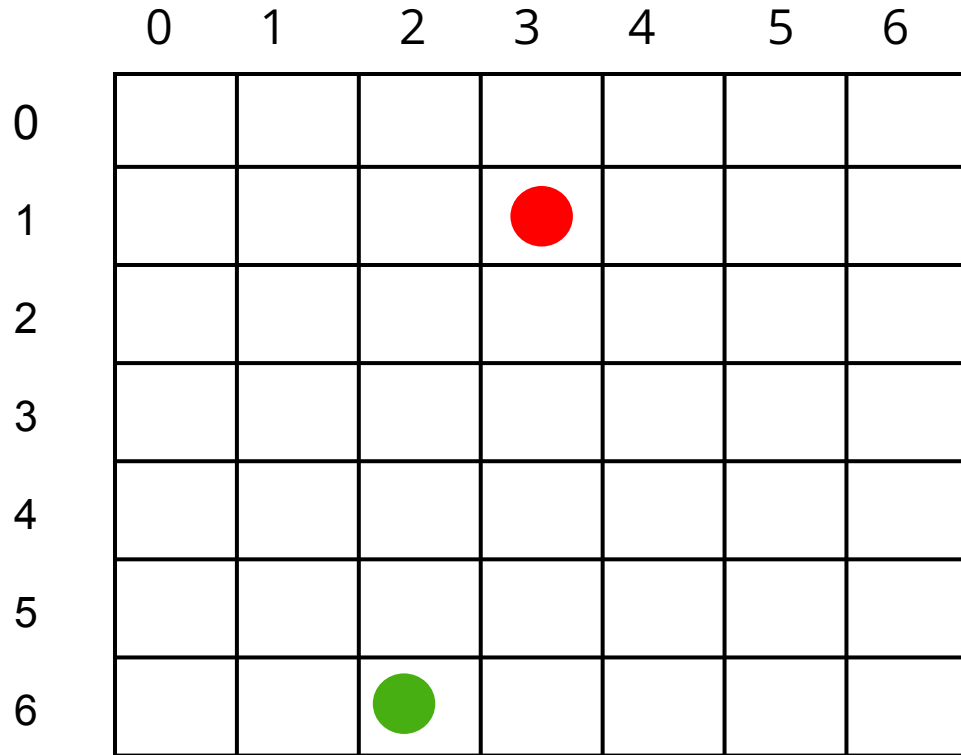




# Beat No...2

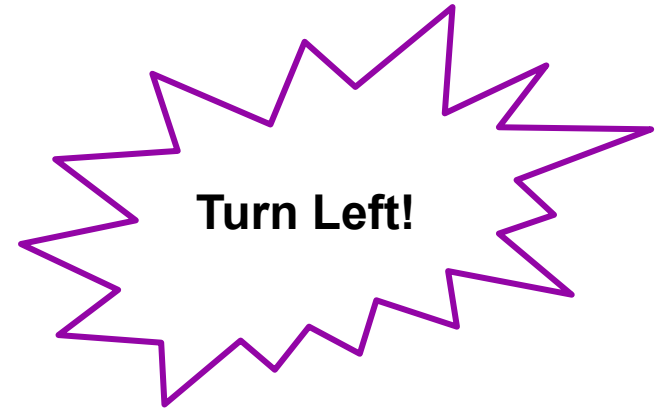


# Beat No...3

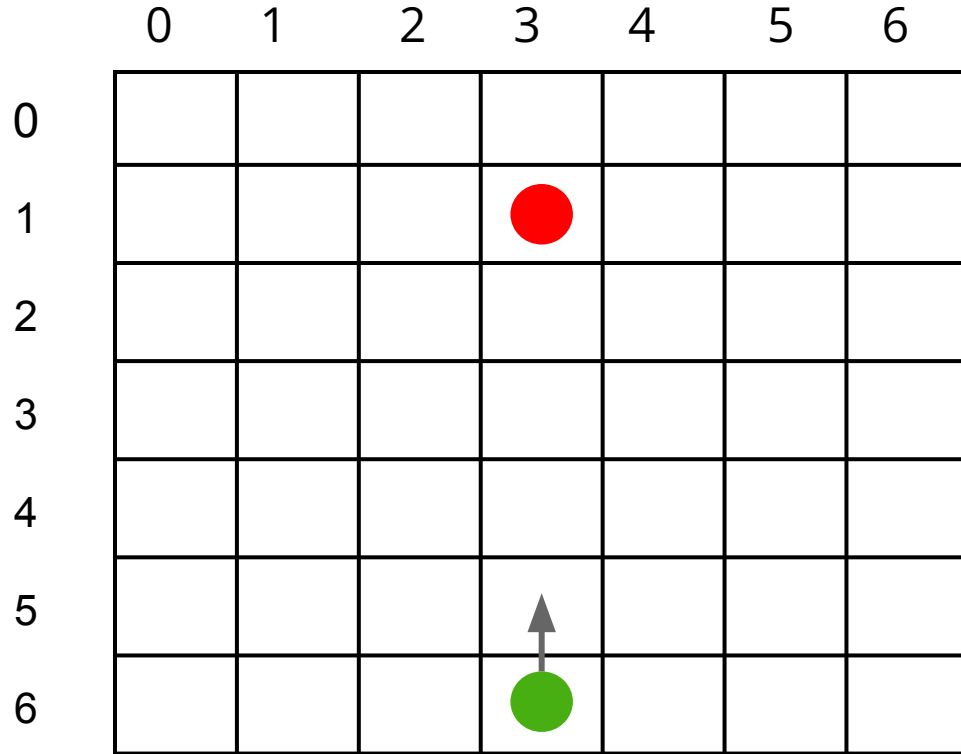


# Beat No...4

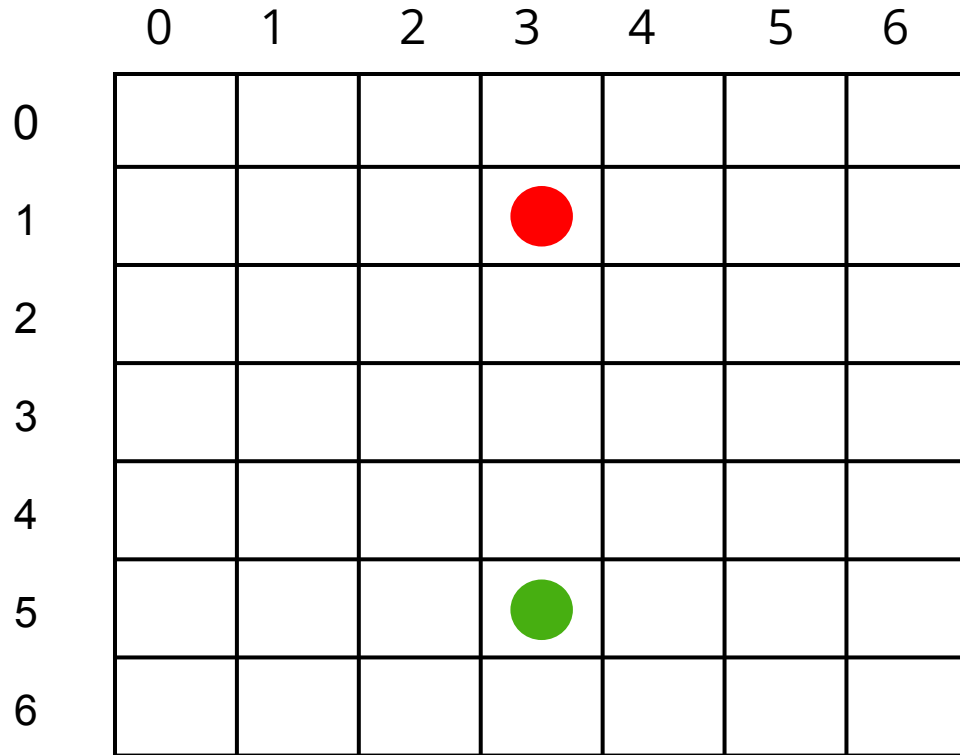
	0	1	2	3	4	5	6
0							
1				●			
2							
3							
4							
5							
6				●			



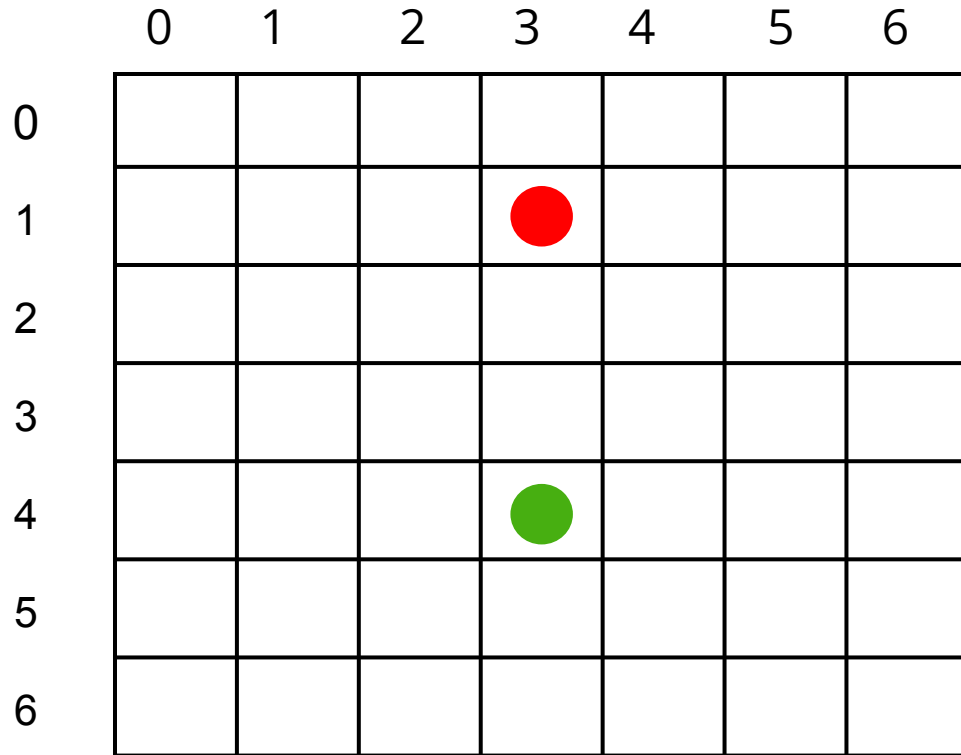
# Beat No...4



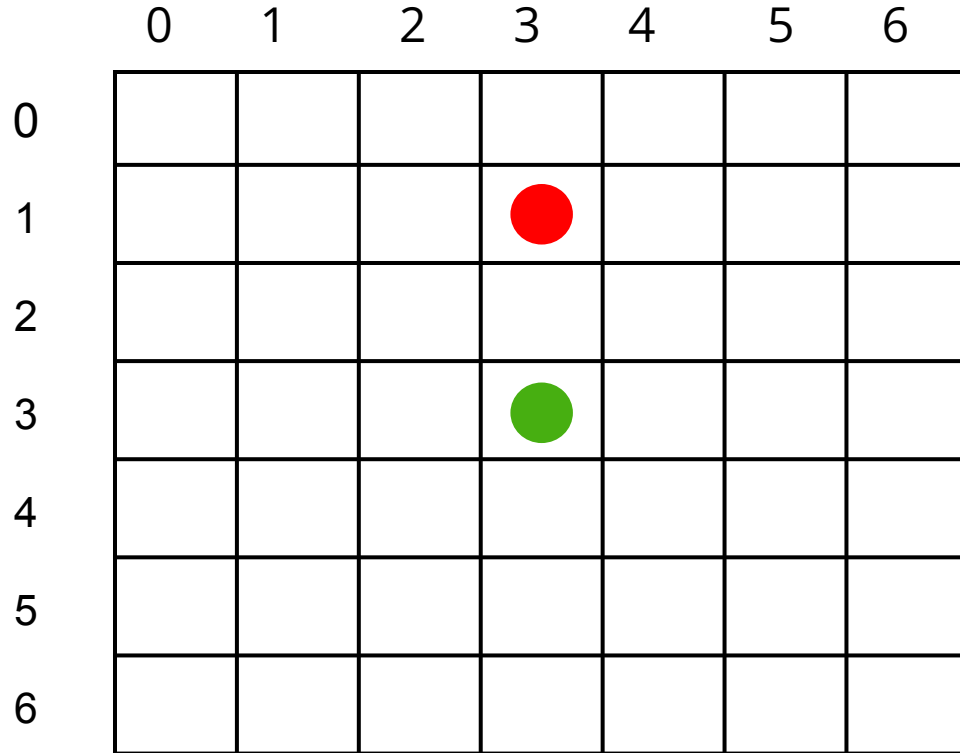
# Beat No...5



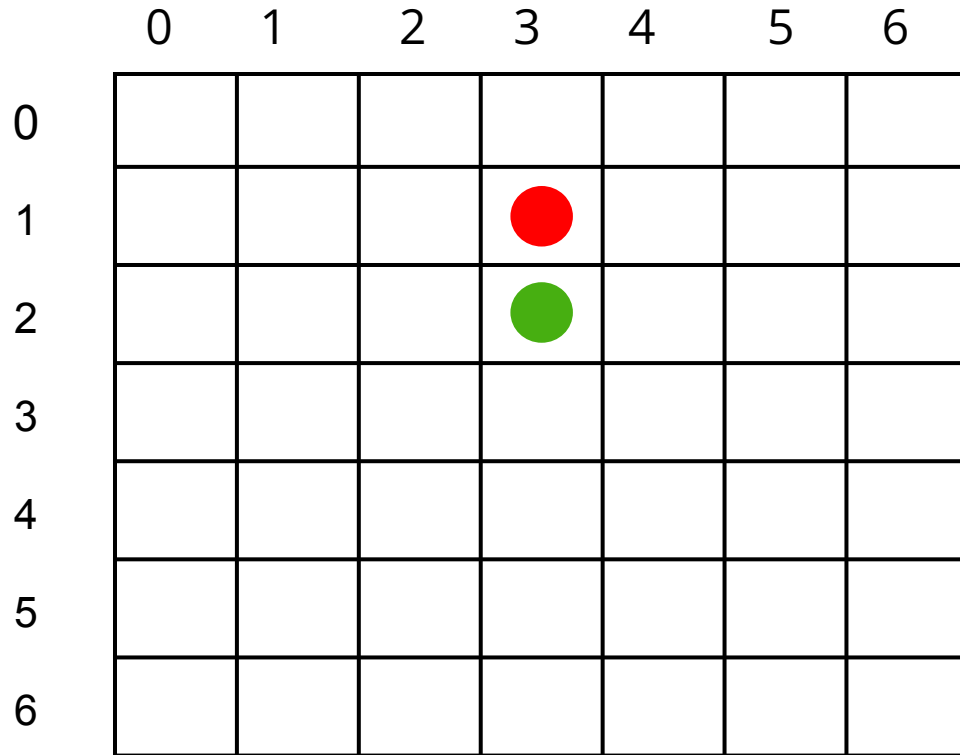
# Beat No...6



# Beat No...7

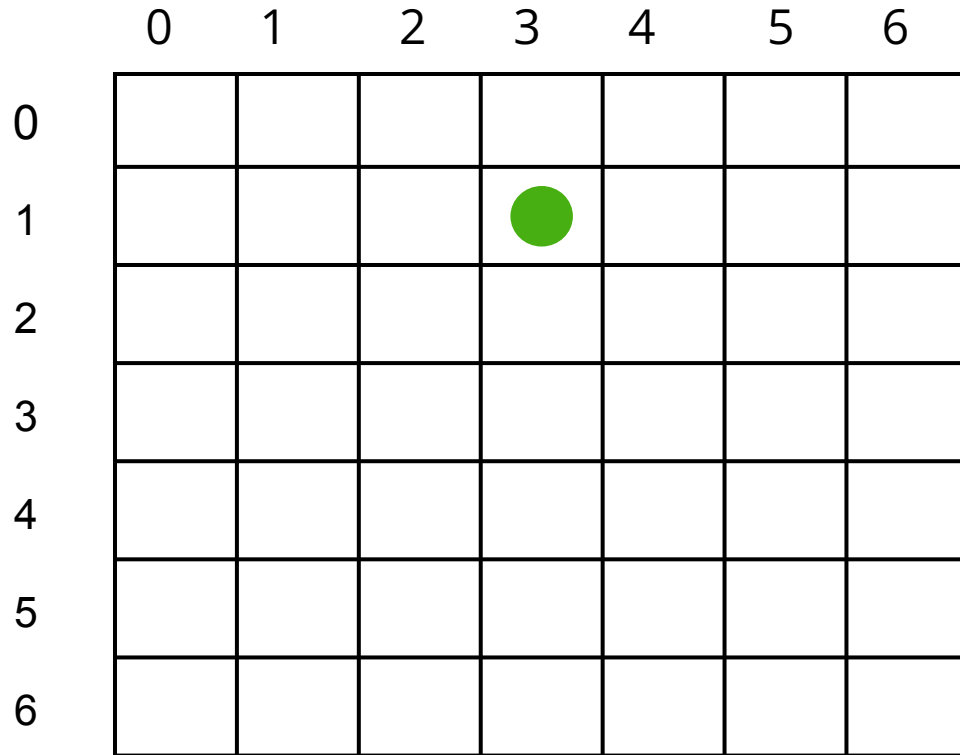


# Beat No...8

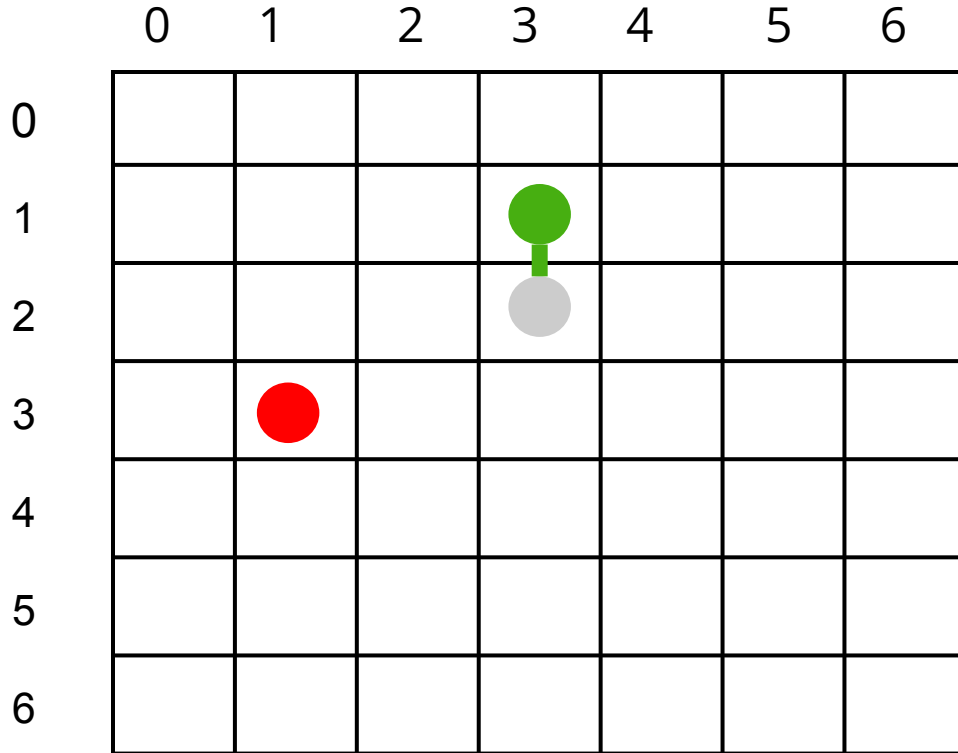




# Beat No...9



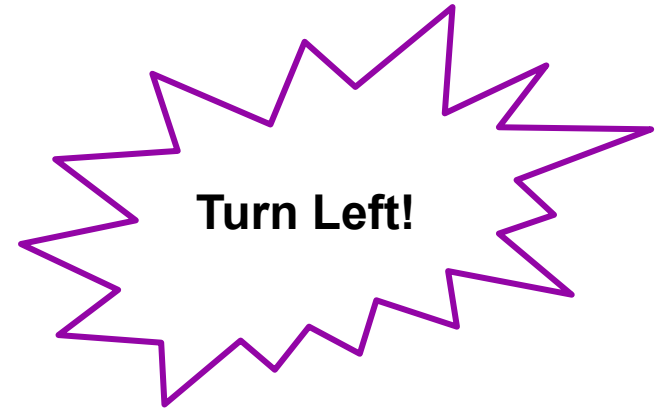
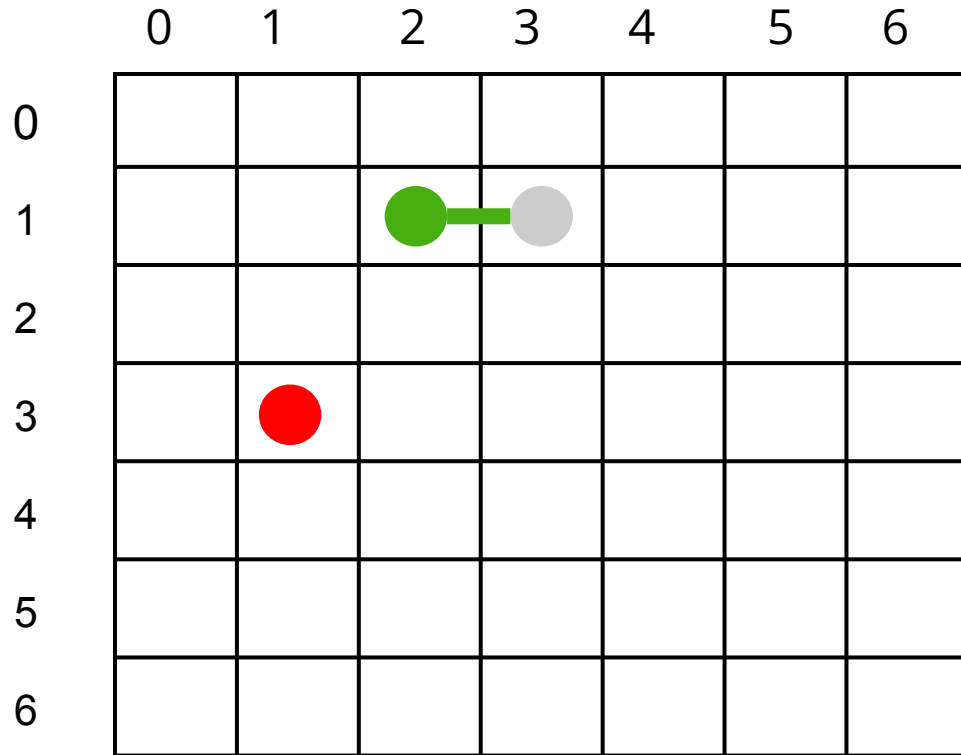
# Snake Eats The Apple!



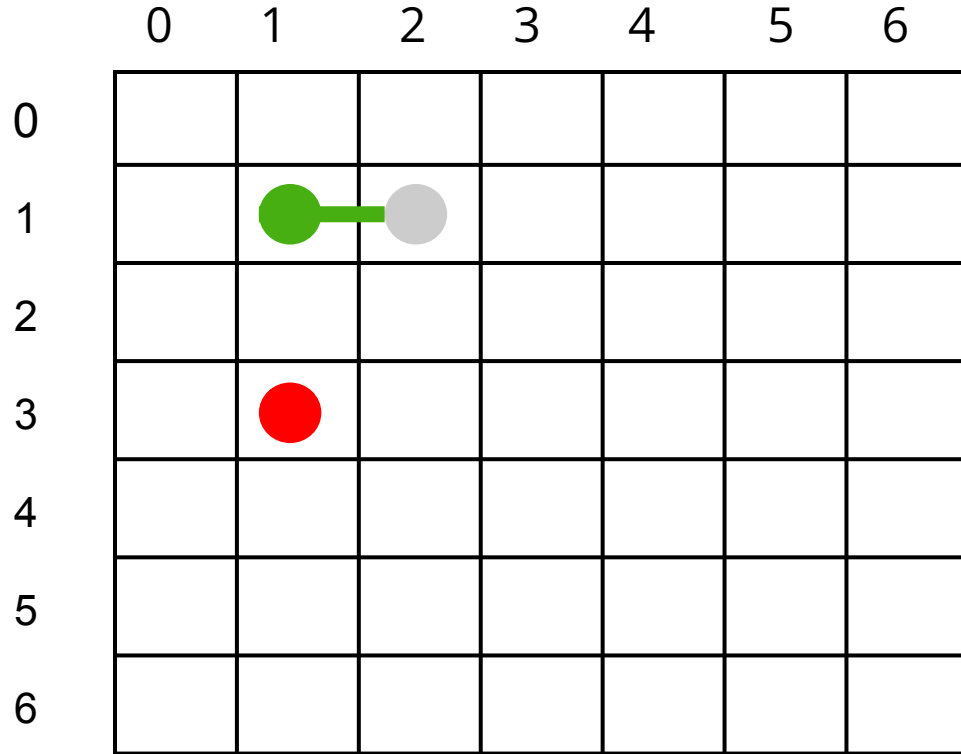
Once the snake gets to the apple, you'll need decode a new set of coordinates for a new apple

The snake will be joined by another tutor so now it takes up 2 squares

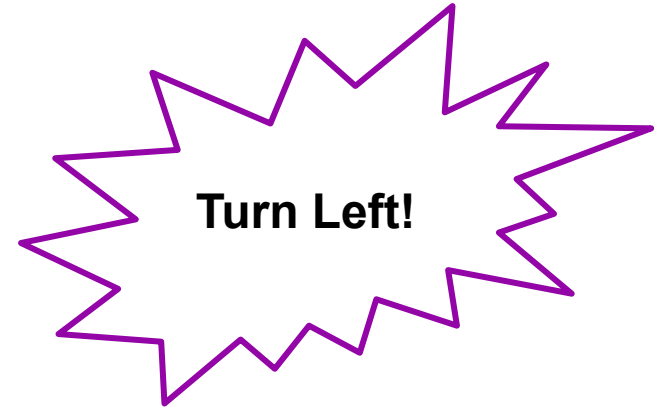
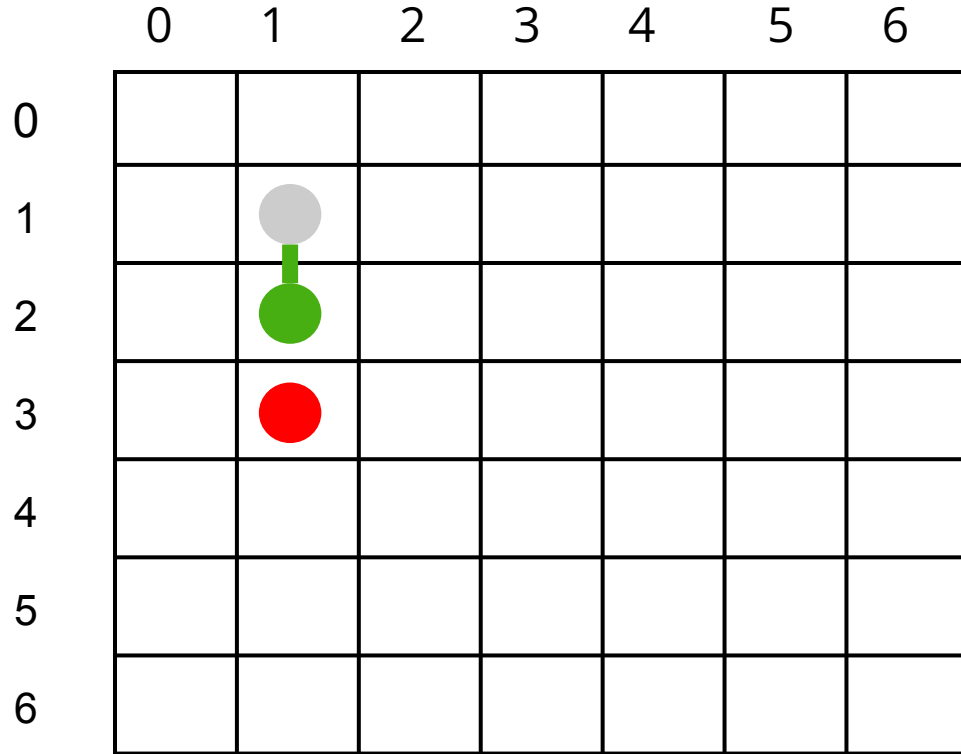
# Beat No...10



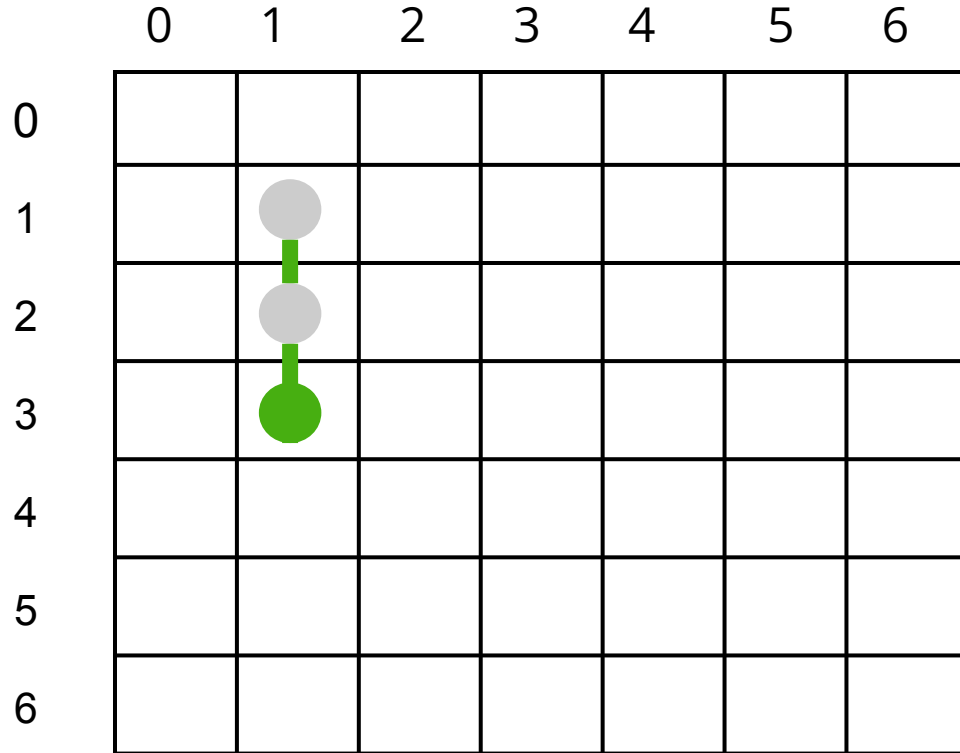
# Beat No...11



# Beat No...12



# Beat No...13

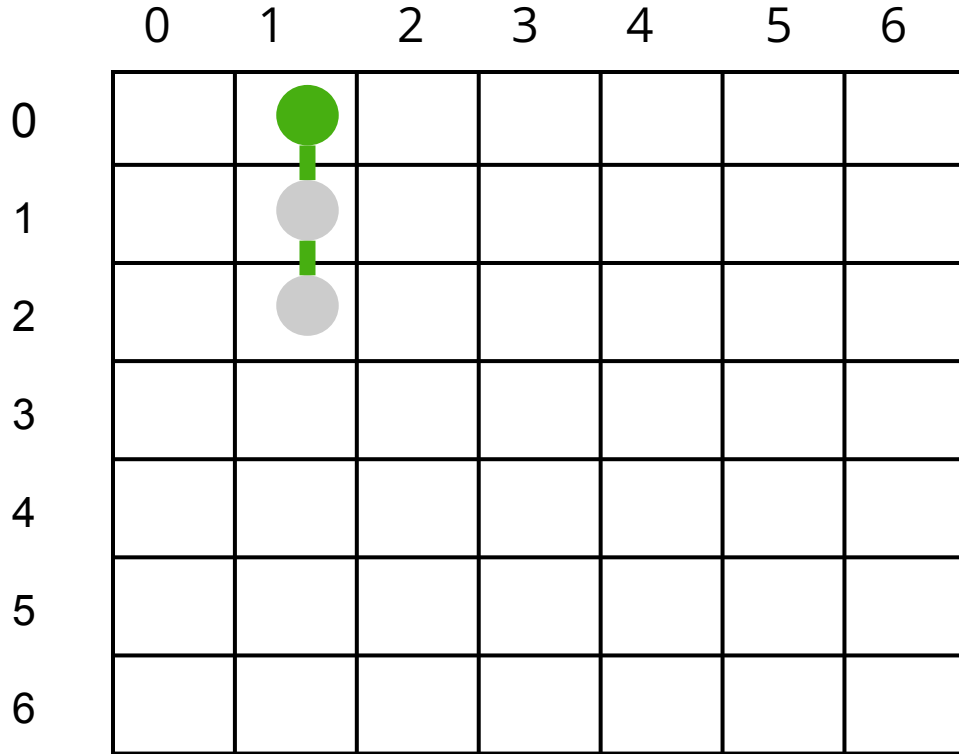


# You lose if...

	0	1	2	3	4	5	6
0							
1							
2							
3							
4							
5							
6							

- The snake hits the sides
- The snake hits itself

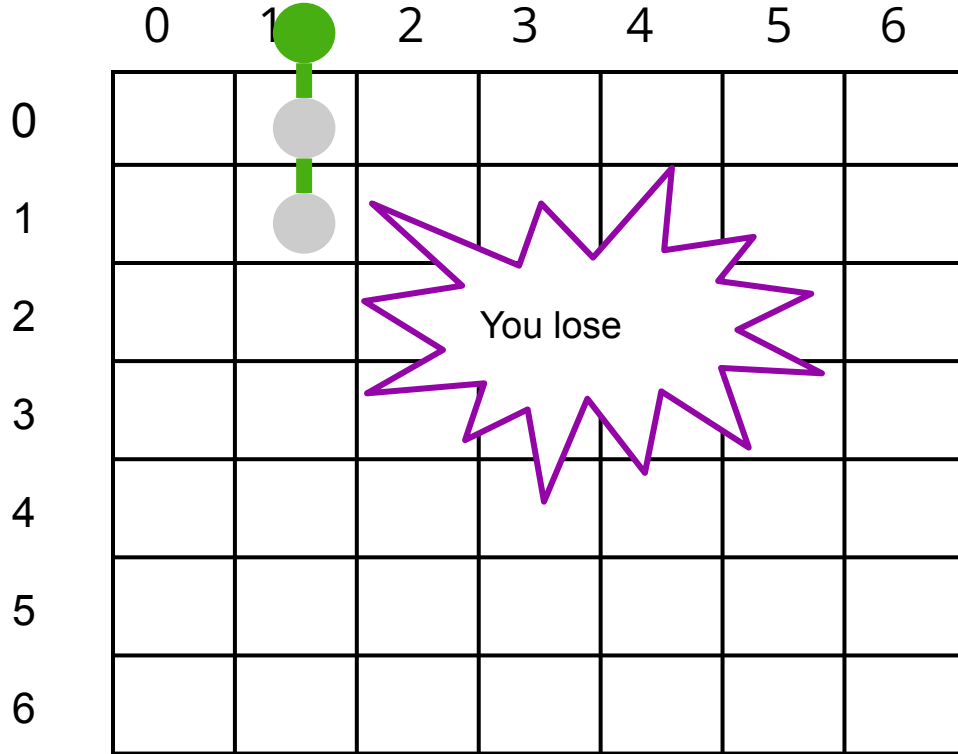
# Hit the Sides



Don't let the snake go off the edge!

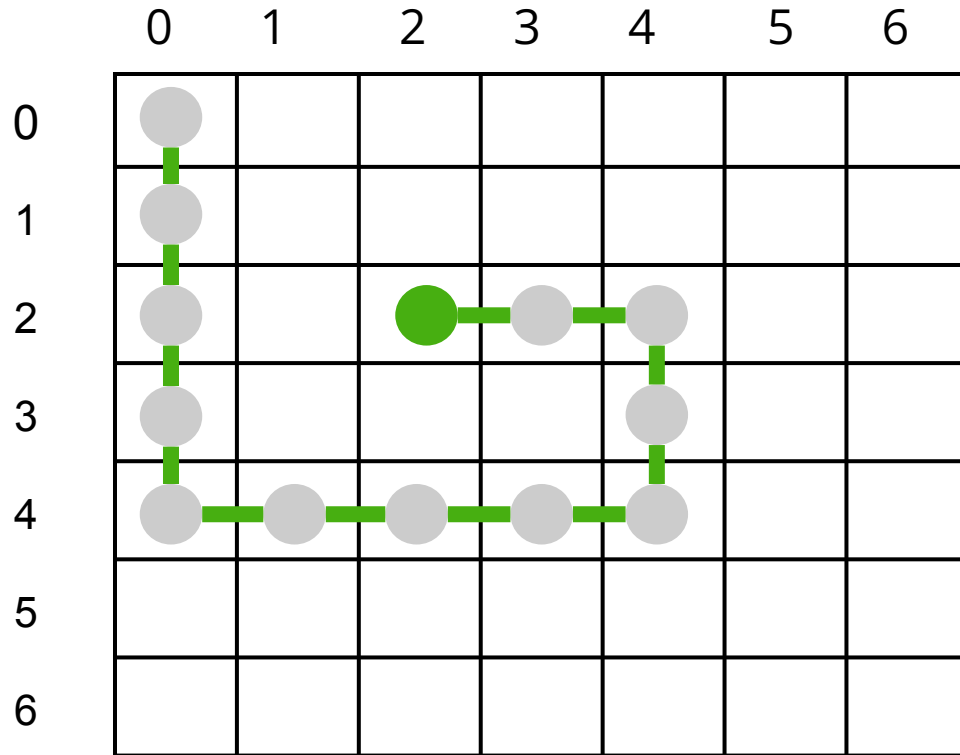


# Hit the Sides



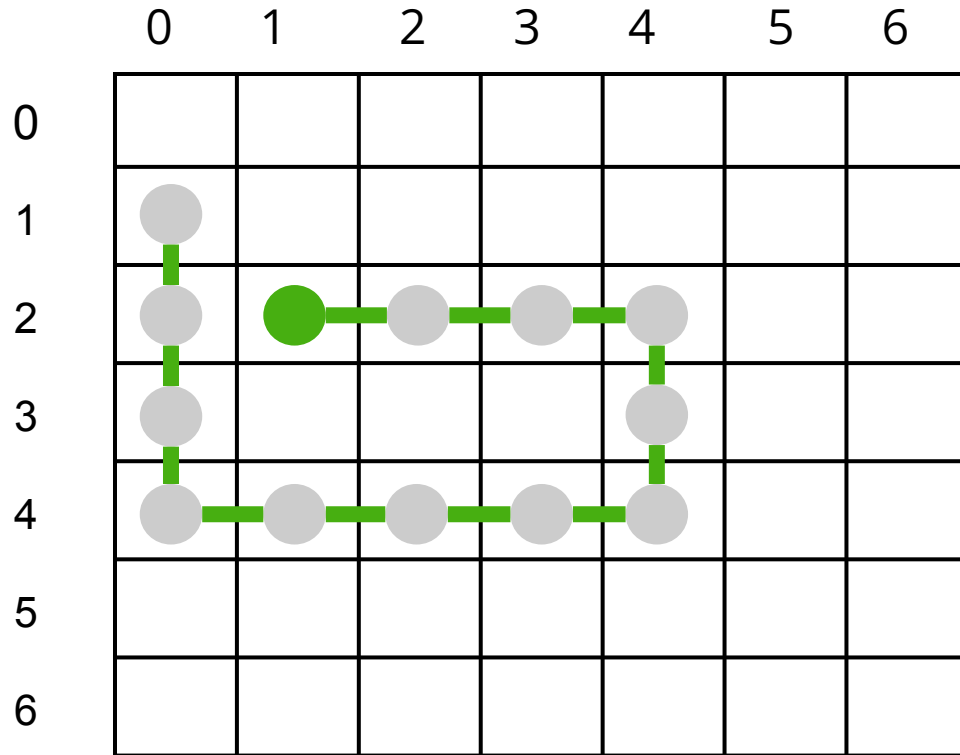
Don't let the snake go off the edge!

# Snake hits itself



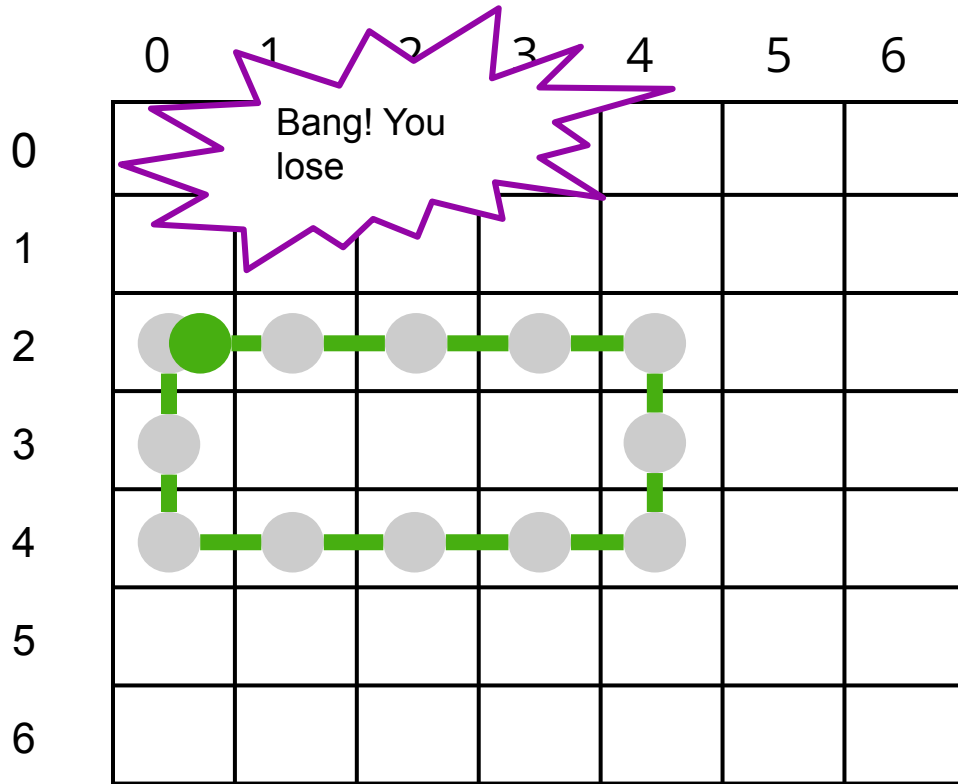
The snake can't run into itself!

# Snake hits itself



The snake can't run into itself!

# Snake hits itself

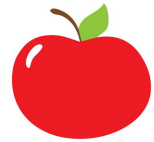


The snake can't run into itself!

# We're not making it easy!

The coordinates for the apples have been encoded in binary numbers like this:

(0101, 0010)



You will need to decode them back into decimal before playing the game.

There are instruction posters on the wall to help you.


# Decoding Binary to Decimal

We've given you a table do to the working out.  
The first example has been partially filled in.  
Let's work through it together.

Binary Number	Working Out				Decimal Number
0101	<b>Eight</b>	<b>Four</b>	<b>Two</b>	<b>One</b>	<b>?</b>
	0	1	0	1	

# Decoding Binary to Decimal


Binary Number	Working Out				Decimal Number
0101	<b>Eight</b>	<b>Four</b>	<b>Two</b>	<b>One</b>	?
	0	1	0	1	



Multiply each number in the second row by the number in the first row and add them up.

# Decoding Binary to Decimal

Binary Number	Working Out				Decimal Number
	Eight	Four	Two	One	
0101	0	1	0	1	?



Multiply each number in the second row by the number in the first row and add them up.

$$0 \times 8 + 1 \times 4 + 0 \times 2 + 1 \times 1 =$$



# Decoding Binary to Decimal

Binary Number	Working Out				Decimal Number
0101	<b>Eight</b>	<b>Four</b>	<b>Two</b>	<b>One</b>	<b>5</b>
	0	1	0	1	

Multiply each number in the second row by the number in the first row and add them up.

$$\begin{aligned} 0 \times 8 + 1 \times 4 + 0 \times 2 + 1 \times 1 &= \\ 0 + 4 + 0 + 1 &= 5 \end{aligned}$$