Answers to Questions from TT 7.2.1

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Hand execution using a trace table

Demonstrate how the following code is executed in the computer.

```
 1 def whatshouldthisfunctionbecalled?(data, val)
 2     i = 0
 3     result = false
 4     while i < data.length
 5         if data[i] == val
 6             result = true
 7             return result
 8         end
 9         i = i + 1
10     end
11     return result
12 end
```

Draw and complete trace tables for the following two sets of data and place the final result in the table below:

data	val	Result
[2, 6, -4, 3, 7]	3	true
[-2, 8, 2, -5, 9]	6	false

Once you have completed your trace tables (below) write the name you chose for the function above:

- I think this function should be named *search_array(data, val)*, because it compares the provided value (passed by *val* argument) with each element of the array (passed by *data* argument) to tell if the value appears in the array. If yes, the *result* (boolean) will be set to "true", and if not, it will stay "false".

Place your trace tables below:

For data set: **data** = [2, 6, -4, 3, 7] **val** = 3

data.length	val	i	data[i]	result
5	3	0	2	false
		1	6	false
		2	-4	false

		3	3	true
		4	7	true
		5	nil	true

For data set: **data** = [-2, 8, 2, -5, 9] **val** = 6

data.length	val	i	data[i]	result
5	6	0	-2	false
		1	8	false
		2	2	false
		3	-5	false
		4	9	false
		5	nil	false