

STUDENT FIRST NAME / LAST NAME: \_\_\_\_\_

CLASS: \_\_\_\_\_

# ALGORITHM EXAM #2

## 1h

SCORE	/ 100
COMMENT	

**WARNING /!\**

**YOU NEED TO CHECK CAREFULLY STEP BY STEP THAT YOUR CODE WORKS**

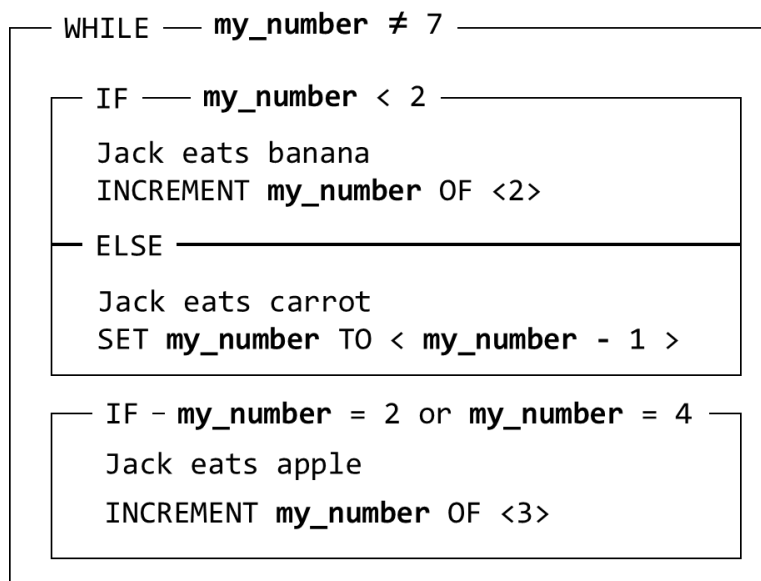
**If you code does not work, you will get a 0 score**

**DO NOT USE INSTRUCTION OR CONDITION THAT ARE NOT ALLOWED**

### Exercise 1 (15 POINTS)

Complete the table. Use a new line every time my\_number changes

SET <my\_number> to < 0 >



my_number	What Jack eats?
0	Banna
2	Apple
5	carrot
4	apple
7	

## Exercise 2 (15 POINTS)

Draw the path of Jack (with arrows  $\longrightarrow$   $\downarrow$  )

SET `<my_variable>` to `< 0 >`

WHILE `my_variable < 3`

REPEAT `<my_variable>` times

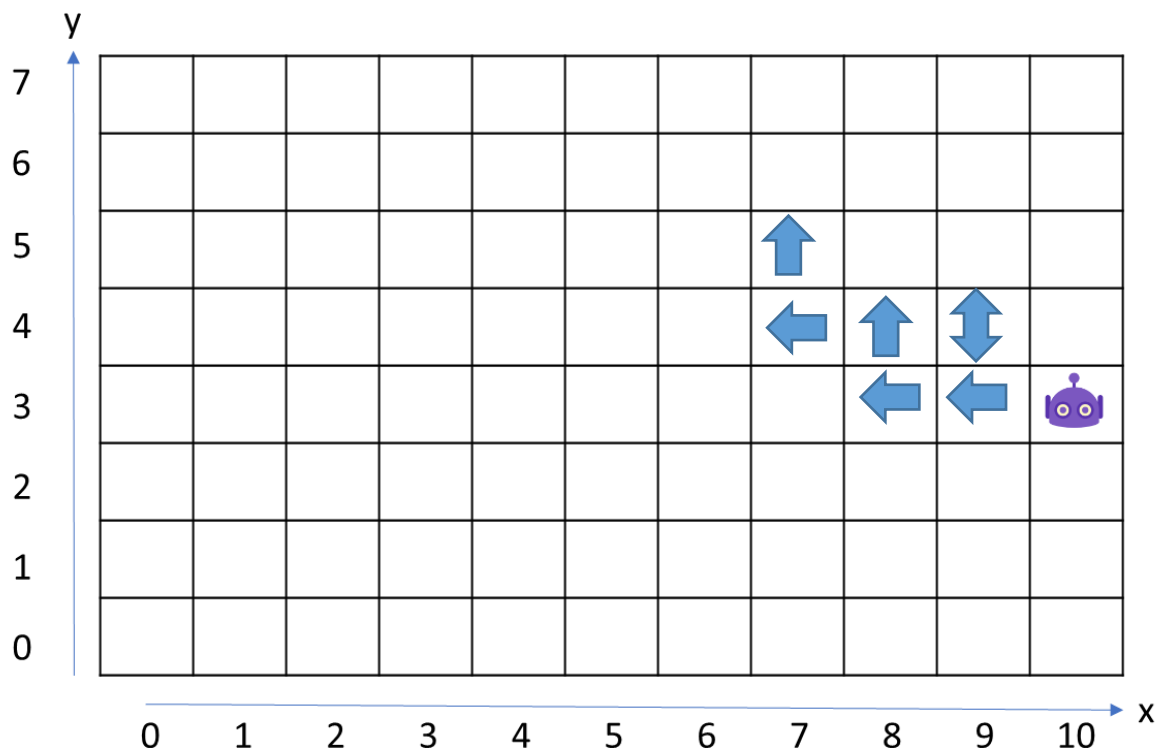
Go down

REPEAT `<my_variable + 1>` times

Go left

Go up

INCREMENT `<my_variable>` OF `<1>`



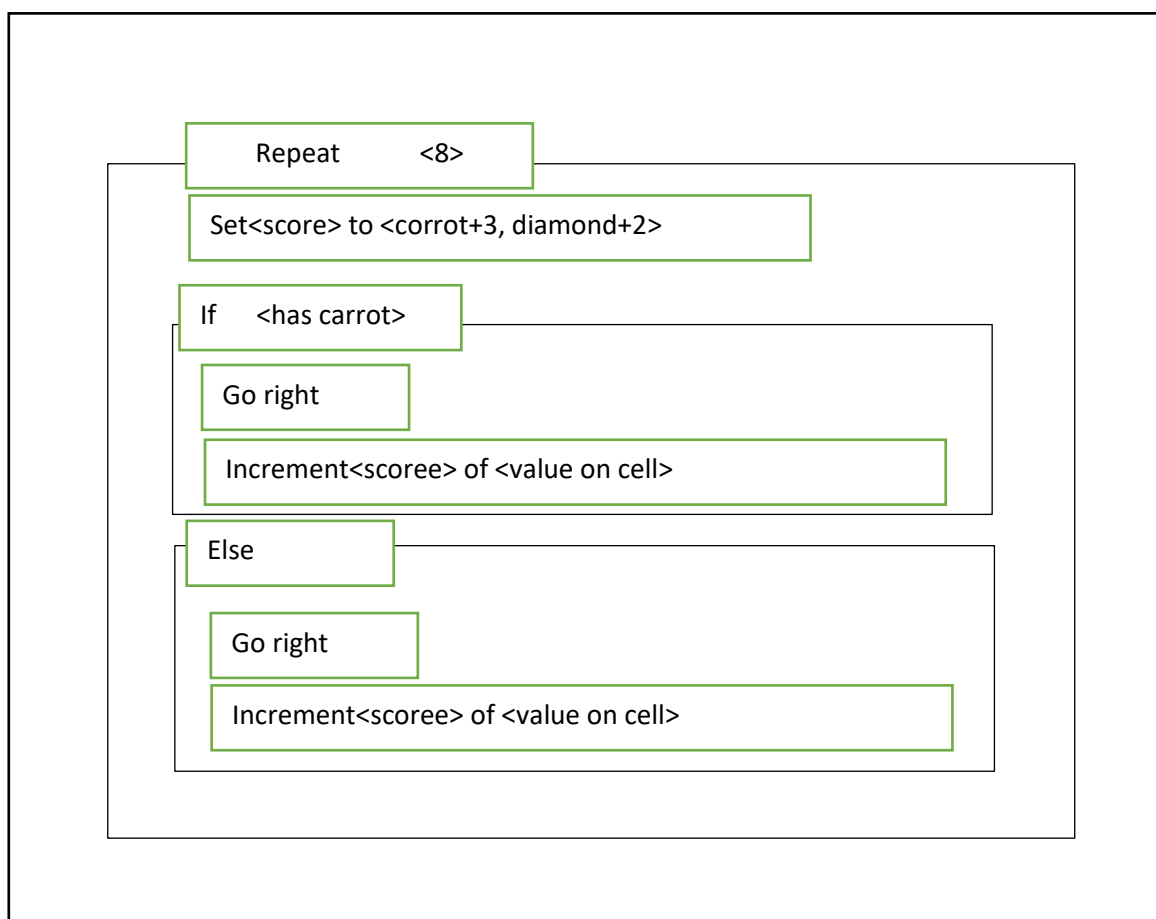
## Exercise 3 (25 POINTS)

Objective	<ul style="list-style-type: none"> <li>Count the score: If has cell diamond: +2 points If has cell carrot: +3 points</li> <li>Write the score on the last cell</li> </ul> <p><b><u>Warning: your code must work for the 2 cases!!!!</u></b></p>
Maximum number of instructions	10
Allowed instructions	GO-RIGHT SET <score> TO < > INCREMENT <score> OF < > REPEAT < > TIMES <score> IF <CONDITION> IF <CONDITION> ELSE WRITE <score>
Allowed conditions	<HAS CARROT> <HAS DIAMOND>

### CASE 1

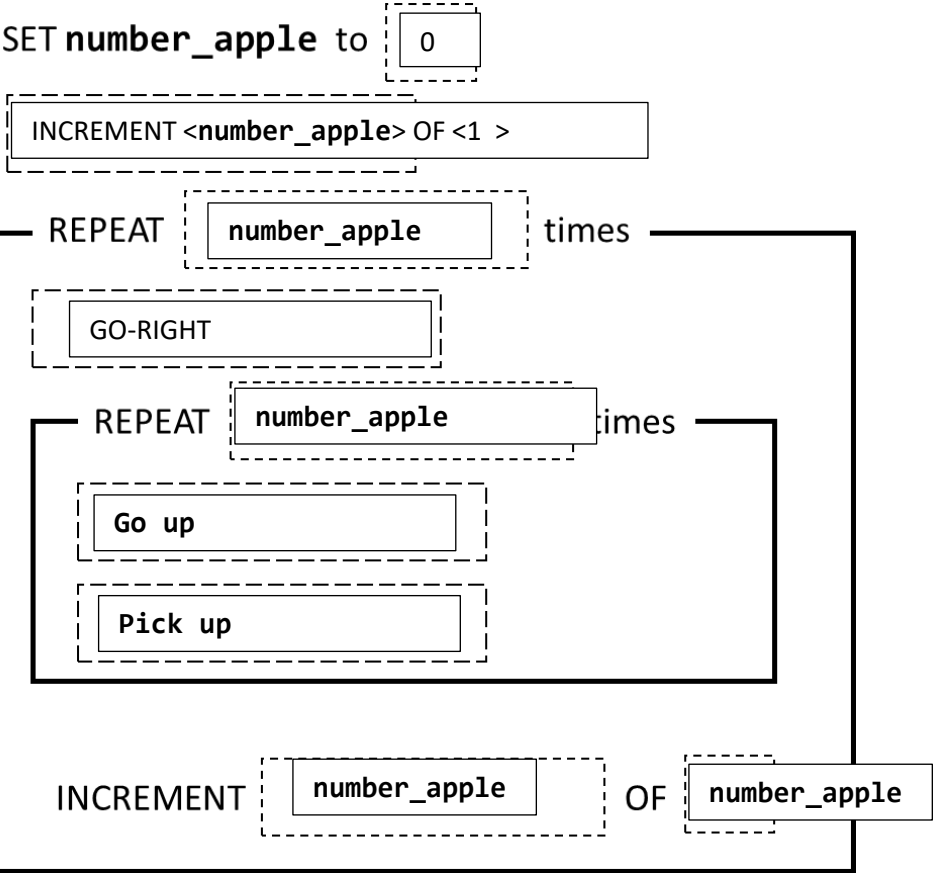
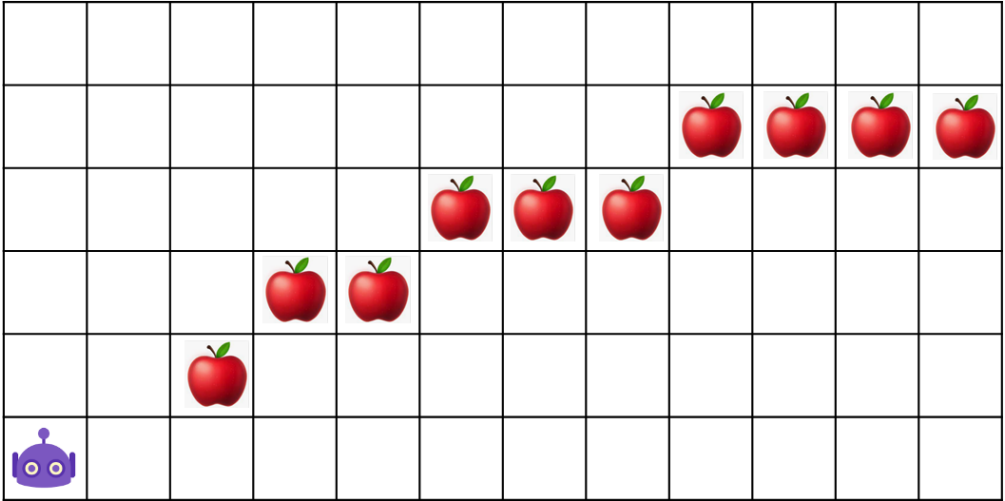


### CASE 2

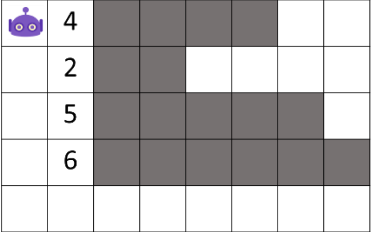


Exercise 4 (20 POINTS)


Objective	<ul style="list-style-type: none"><li>Pick up all apples</li></ul>
Allowed instructions	GO-RIGHT    GO-UP    PICK-UP    IF <CONDITION> SET <number_apple> TO < >    IF <CONDITION> ELSE INCREMENT <number_apple> OF < > REPEAT < > TIMES    WRITE < number_apple > < number_apple >    WHILE <CONDITION>
Allowed conditions	<b>NO CONDITION ALLOWED</b>




## Exercise 5 (25 POINTS)

Objective	<ul style="list-style-type: none"> <li>For each lines: there is a number N. Paint N cells on the right side this number</li> <li>But if cell has a cross, do not pain the cell</li> </ul> <p>For instance , for case 1 , the result will be :</p>  <p><b><u>Warning: your code shall work for the 2 cases!!!!</u></b></p>
Max number of instructions	10
Allowed instructions	GO-RIGHT GO LEFT REPEAT < > TIMES GO DOWN GO UP PAINT  Variables: SET <number_of_paint> TO < > <number_of_paint> <VALUE ON CELL>
Allowed conditions	<b>NO CONDITION ALLOWED</b>

### CASE 1

	4								
	2								
	5								
	6								

### CASE 2

	3								
	1								
	8								
	4								

SET <number\_of\_paint> TO < >