Name _____ Period _____

Skill 28.01 Exercises 1 thru 3

Basic If-Statements

```
MOVE_FORWARD

IF (CAN_MOVE forward)

    MOVE_FORWARD

ELSE

    ROTATE_LEFT
    MOVE_FORWARD
    ROTATE_RIGHT
    MOVE_FORWARD

MOVE_FORWARD
```
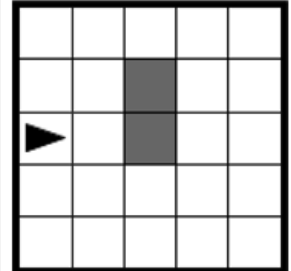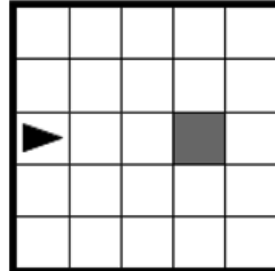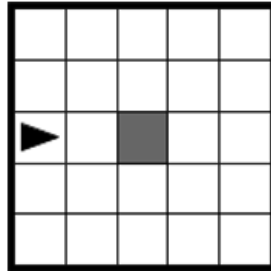
```
IF (CAN_MOVE (left))
{
   ROTATE_LEFT ()
   MOVE_FORWARD ()
}
ELSE
{
   ROTATE_RIGHT()
   MOVE_FORWARD ()
}
IF (CAN_MOVE (right))
{
   ROTATE_RIGHT ()
}
ELSE
{
   ROTATE_LEFT ()
}
MOVE_FORWARD ()
```
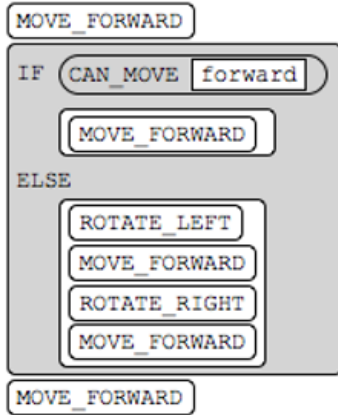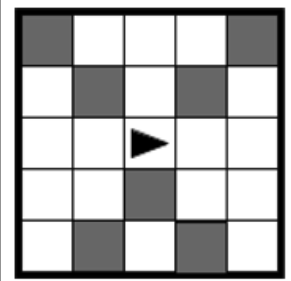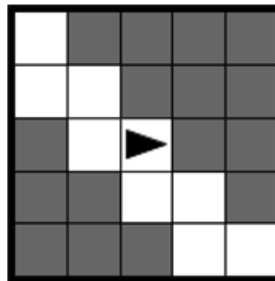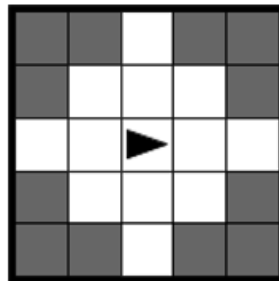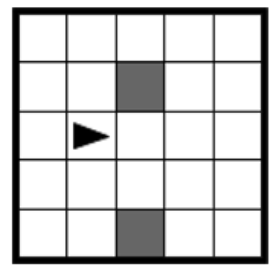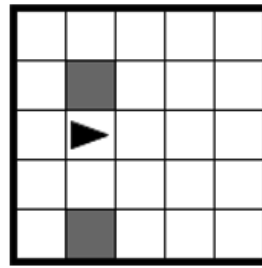
Name _____ Period _____

Nested If-Else Statements

```
IF (CAN_MOVE (forward))
{
  IF (CAN_MOVE (left))
  {
    ROTATE_LEFT ()
  }
  ELSE{
    ROTATE_RIGHT ()
}
MOVE_FORWARD ()
}
ELSE
{
  ROTATE_LEFT ()
  ROTATE_LEFT ()
}
MOVE_FORWARD ()
```
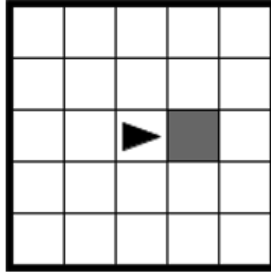
Skill 28.02 Exercise 1

Below is the start of a program. Write an if-else statement that checks whether or not someone is old enough to drive. If they are 16 or older, indicate to the user that they are old enough to drive. Otherwise, indicate to the user how long they need to wait until they can drive.

```
var age = prompt("What is your age");
```

Name _____ Period _____

Skill 28.02 Exercise 2

Consider the following rankings and the corresponding gpa's. Notice the ranking is out of order! Write a program that assigns the correct person to the correct rank.   Note, you can access the name and gpa of each rank with the following notation, rank1.gpa, rank1.name. For example, rank1.gpa has a value of 4.15, and rank1.name has a value of Bugs.

	name	gpa
rank1	Bugs	4.15
rank2	Bart	4.30
rank3	Kyle	4.28

Name _____ Period _____

Skill 30.03 Exercise 1

Consider the WORDLE game described below,

Guess the **WORDLE** in 6 tries.

Each guess must be a valid 5 letter word. Hit the enter button to submit.

After each guess, the color of the tiles will change to show how close your guess was to the word.

Examples

W E A R Y

The letter **W** is in the word and in the correct spot.

P I L L S

The letter **I** is in the word but in the wrong spot.

V A G U E

The letter **U** is not in the word in any spot.

A new WORDLE will be available each day!

The following code can be used to create the first row of letter boxes.

```
var dim = 50;
function makeLetterBox(d, xPos, yPos, id){
var b = document.createElement("div");
b.style.width = d+"px";
b.style.height = d+"px";
b.style.position = "absolute";
b.style.left = xPos + "px";
b.style.top = yPos + "px";
b.style.border = "blue thin solid";
b.style.fontSize = "2em";
b.style.textAlign = "center";
b.style.paddingTop = "5px";
b.style.color = "white";
b.style.innerHTML = "";
b.id = id;
document.body.append(b);
return b;
}

var b0 = makeLetterBox(dim, dim*0, dim*0, 0);
var b1 = makeLetterBox(dim, dim*1, dim*0, 1);
```

Name _____ Period _____

```
var b2 = makeLetterBox(dim, dim*2, dim*0, 2);
var b3 = makeLetterBox(dim, dim*3, dim*0, 3);
var b4 = makeLetterBox(dim, dim*4, dim*0, 4);
```

The code above displays the following.

Below represents possible scenarios when the user types a guess,

The word to guess is defined below,

```
wordToGuess = wordBank[Math.floor(Math.random()*wordBank.length)];
```

Write an algorithm that could be used to check the first letter of the guess. Your algorithm should get the letter from the first box only (innerHTML) and compare it to each letter in the word. If the letter is not in the word, the background of the box should be changed to GRAY. If the letter is in the word, but not in the correct location, the background color of the box should be changed to YELLOW. If the letter is in the word and in the correct location, the box should be changed to GREEN.

AP Computer Science Principles
Ticket Out the Door
Set 28: If-Else Statements

Name _____ Period _____