Computer Science Homework

1. Start your reading in our text on page 30 where it says BOOLEANS. Type the examples in blue into your Google console. Stop at the end of the chapter.

2. You're asked to write the JavaScript logical statement for the following scenario: A gamer can get a free round of play at the end of his game by either scoring 4000 or more points or destroying 5 or more enemy ships. You write the following code and find the following scenario gives the wrong result. What is wrong?

```
var points = 4000;
var enemyShipsDestroyed = 3;
var freePlay = points > 4000 || enemyShipsDestroyed > 5;
console.log("You win a free game: " + freePlay);
```

3. In a highly rated video game, you can win a round by: eliminating all the opponents or securing the objective. One of these must occur before time runs out. (For those familiar with the video game, we are going to assume you still have a man left alive on your team, and the game doesn't end in a draw.)

```
var opponents = 5;
var objectiveSecured = false;
var isTimeLeft = true;
var win = (opponents === 0 || objectiveSecured === true) && isTimeLeft === true;
console.log("You win: " + win);
```

a. What is logged to the console from the above code?

b. Can you think of a value you can assign into the opponents variable that would change the value of the win variable?

c. If the isTimeLeft variable is assigned to false, what will the win variable always equal?

d. Does the following code work just as well as the above code? If so, why?

```
var opponents = 5;
var objectiveSecured = false;
var isTimeLeft = true;
var win = (opponents === 0 || objectiveSecured) && isTimeLeft;
console.log("You win: " + win);
```

e. Did you notice how descriptive my variable names were? Did the descriptive names help you understand the code despite the lack of comments?

f. The value contained in the variable opponents is what kind of data type?

g. The value contained in the variable win is what kind of data type?