2/10/2021

W1D2 Data Types and Operators

1. Write a JavaScript program that ask a user for a volume in quarts then converts that value in liters.
2. Write a JavaScript program that asks a user for a distance in kilometers and then convert that value in miles.
3. An employee at a grocery store must frequently place boxes of cans in stacks. Write a program that allows him to enter the total number of boxes and the number of boxes he will place in each stack. Your program must output the number of stacks he will have to make. All the stacks except the last one must have the exact number of boxes that the employee specifies. The last stack must have the exact number or fewer boxes. For example, if the employee enters 74 total boxes and 6 boxes in each stack your program must output 13.
4. Write JavaScript program to compute the mileage of a vehicle. Your program should allow the user to enter the beginning and ending odometer readings and the number of gallons of gas used and should output the mileage in miles per gallon.
5. When you exercise to strengthen your heart, you should maintain your heart rate within a range. To find that range, subtract your age from 220. This difference is your maximum heart rate per minute. Your heart simply will not beat faster than this maximum (220 – age). When exercising to strengthen your heart, you should keep your heart rate between 65% and 85% of your heart's maximum. Write a JavaScript program that asks for a person's age and computes and outputs the slowest and fastest rates necessary to strengthen his heart.

Answer the following questions in a word document based on your reading assignment

1. What will be the output of running following code?

```
console.log(Number(null));

console.log(Number(undefined));
console.log(Boolean("0"));
console.log(Boolean(" "))
```

2. What will be the output of running following code?

```
let a = b = 2;

let c = 3 - (a + b + 1);

console.log(a--);
console.log(++c);
console.log(a);
console.log(c);
```

3. What is the significance of + operator before prompt function in following code?

```
let a = +prompt("First number?");
```

4. What is the use of || and && operators (logical-or and logical-and) in JavaScript? Explain with an example of each.

5. Which of the following statements is true?
   a. In computer programming, a statement can be part of an expression.
   b. In computer programming, an expression can be a part of a statement.