

# Assignment 1

Make sure to test all your answers in the console.

1. Review the documentation for `parseInt`<sup>1</sup>. Then answer the following questions.
  - a. The string "ffff" represents a hexadecimal number. Write an expression `parseInt(...)` that would return the number that this string represents.
  
  - b. Do the same for the string "10010101" that represents a number in binary format.
  
  - c. What does `parseInt` do if it is called with a string it cannot properly process?
  
2. Look at the `Math` library<sup>2</sup>. Then answer the following questions (do NOT use experimental methods; those marked with a little symbol on their side):
  - a. Write the expression that would compute the circumference of a circle of radius `r`.
  
  
  
  
  
  
  
  
  
  
  - b. Write an expression that returns a boolean telling us if the number `x` is less than 1 in absolute value.

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<sup>1</sup>[https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/parseInt](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/parseInt)

<sup>2</sup>[https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/Math](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math)

- c. Use `Math.log`<sup>3</sup> to write an expression that would compute the base 2 logarithm of the number `n`.
- d. Combine `Math.random` and `Math.floor` to write an expression that produces a random integer from 0 to 2 (i.e. 0, 1 or 2).
3. How many different types of numbers do we have in Javascript? (Circle correct one)
- Two: 32bit integers and double-precision 64bit floating point numbers
  - One: all numbers are double-precision 64bit floating point numbers
  - Four: short and long integers, single- and double-precision floating point numbers
4. The expression `x/+0` for `x` a **finite number** can have 3 different values, depending on what value `x` has. List all 3 values along with examples of `x` values that produce them.
5. True or False: Javascript can only be run inside a web browser.

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<sup>3</sup>[https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\\_Objects/Math/log](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Math/log)