1. Select five methods **that can be used on an Array and describe the following for each:**

a) what the method signature is

pop()
push()
slice()
sort()
concat()

b) what the method does

pop() - Removes the last element from an array and returns it. It also changes the length of the array.

push() - Adds one or more elements to the end of an array and returns the new length of the array.

slice() - Returns a copy of a portion of an array into a new one selected from start to end (end not included), and where the start and end represent the index of the items in the array, and the original array is not modified.

sort() – Sorts the elements of an array and returns in ascending order.

concat() – Merges two or more arrays, and returns a new array without modifying the existing arrays.

c) why would this method be useful (how could you use it)?

pop() – It can be used manipulate data in an array when there's need to do something with the shortened array or with the popped element.

push() – This method can be used when you already created an array, but you need more elements to the array or list.

slice() – When there's needs to extract items from a to-do list, for example, this can method can be useful.

sort() – This is useful if you have a list of names you want to display in alphabetical order.

concat() – If you need to merge two lists, like groceries lists, contact() can be useful

2. What is the difference between == and ===?

== Converts the operands into the same datatype an compares them.
=== Compares the datatypes of the variables without converting them.

3. What is a closure and how does it work? Provide an example.

A closure is a function that has access to variables in the outer scope from its inner scope. The closure preserves the outer scope inside its inner scope.

For example, the greeting() function takes one argument named message and returns a function that accepts a single argument called name.

The return function returns a greeting message that is the combination of the message and name variables.

The greeting() function below behaves like a function factory. It creates sayHi() function with the message Hi.

The sayHi() is a closure. It shares the same function body but stores a different scope.

In the sayHi() closure, the message is Hi.

```
function greeting(message) {
  return function(name){
      return message + ' ' + name;
  }
}
let sayHi = greeting('Hi');
console.log(sayHi('John')); // Hi John
```

4. What is your favorite thing you learned this week?

My favorite thing I learned this week was that you can manipulate data in arrays with different methods, and that there's a lot of documentation where you can find out how they work, or how can you use them depending on what you want to accomplish with them.

Sources:
https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array/
https://careerkarma.com/blog/javascript/
https://www.tutorialspoint.com/difference-between-and-operator-in-javascript