socrative

Answer Key
October 19, 2023

JavaScript Basics

1. JavaScript is a strongly typed language

T True

✓ F False

i JavaScript is a dynamically typed language. This means that we do not specify the data type of a variable when we declare it. Instead, JavaScript will determine what the datatype of the value is.

2. What are the valid ways to declare a variable in JavaScript? (Select all that apply)

✓ A var age = 32;

B int age = 32;

✓ C let age = 32;

D number age = 32;

E age as number = 32;

✓ F const age = 32;

i **var** is the original method used to declare a variable in JavaScript. As the language has evolved into a more robust programming language it became apparent that using the **var** keyword had unwanted side effects and developers needed a bit more control of variable management.

let is used to declare a variable whose value can later be changed.

const is used to declare a variable (constant) whose value CANNOT be changed later. You must provide a value at the time of declaration (on the same line of code)

3. Which of the following variable names is **INVALID**?

A top10Songs

✓ B 5BestAuthors

C customerShippingAddress

D _TOTAL_COUNT_

i * Variables can begin with a **letter** or **underscore (_)**
* Variables **cannot** begin with a number
* Variables can contain **letters, numbers** and **underscores (_)**
* Variables **cannot** contain a space

4. What is the best practice for naming that will hold the value of the date that a project will begin?

- A date
- B start_date
- C prjStartDate
- ✓ D projectStartDate
- E project_start_date
- F ProjectStartDate

i Although all variable names in this example are legal variable names in JavaScript, the standard (and best practice) conventions are:

* variables should use **camelCase** naming convention
* variables names should be meaningful - they should describe what is being stored
* try to avoid abbreviations or acronyms for variable names unless they are generally accepted terms

5. What is the datatype of the variable productCost from the following code snippet?

```
let productCost = 15;
```

- ✓ A number
- B int
- C string
- D float

i JavaScript only has a **number** data type.

While JavaScript does differentiate between whole numbers (integers) and decimals (floating point numbers) the same datatype of **number** is used for all numeric values. It will differentiate at run time whether the number needs to be treated as an integer or decimal.

int and **float** are not datatypes in JavaScript.

6. What is the datatype of the variable productCost from the following code snippet?

```
let productCost = "15";
```

- A number
- B int
- ✓ C string
- D float

i Because the value **"15"** is surrounded by quotes JavaScript will store the value as a string.

7.

```
let productCostInput = "15.50";

let productCost = parseInt(productCostInput)
```

What is the value of **productCost** after the code snippet runs?

(see image)

15

i **parseInt()** will only parse the whole number (integer) part of the string. The .50 is ignored during the conversion.

8.

```
let productCostInput = "15.50";

let productCost = parseInt(productCostInput)
```

What change could you make to line 2 to so that the value of productCost is **15.5** instead of **15**?

(see image)

A let productCost = parseFloat(productCostInput);

B let productCost = Number(productCostInput);

C let productCost = +productCostInput;

✓ D All of the above

i **parseFloat(productCostInput)** - this global function parses a string and converts the number to a floating point decimal value (if a decimal is found)

Number(productCostInput) - The Number() function takes a string as an input and converts the string into either a floating point decimal number or an integer, depending on the value within the string

+productCostInput - the + unary operator is a short hand operator for converting a string into a number. It must be added to the beginning of a variable of a string datatype

9. You are a teacher and have bought 24 cookies for your class.

You have 9 students and have determined that you have enough cookies to give 2 cookies to each student.

How can you calculate how many cookies will be left over after all students have taken their 3 cookies?

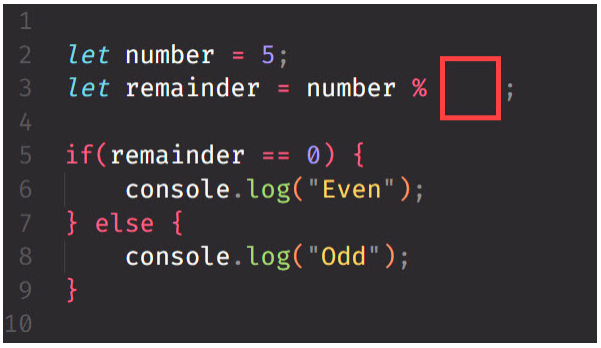
your variables are:
let cookies = 24;
let students = 9;
let cookiesPerStudent = 2;

- A let remaining = cookies / students;
- B let remaining = cookies / cookiesPerStudent;
- ✓ C let remaining = cookies % students;
- D let remaining = cookies % cookiesPerStudent;

i The modulus operator (%) performs integer division and returns the whole number remainder. With the % operator, the only number we care about is the remainder.

24 % 9 = 6
Logic:
24 / 9 = 2 with a remainder of **6**

10. The modulus operator is often used to determine if a number is odd or even. Refer the the code snippet in the image. What number should you add to line 3 to complete this code snippet?



- ✓ A 2
- B 1
- C 5
- D 0

i All even numbers are divisible by 2 with a remainder of 0. Therefore if you divide ANY number by 2, you can look at it's remainder and determine if it is even or odd.

If the remainder is 1 - it is an odd number
If the remainder is 0 - it is an even number