JavaScript for Teens: Tougher Practice Questions on Variables, Data Types, and Operators

Here are 20 tougher questions to deepen your understanding of **data types**, **let/const**, and **operators** (still avoiding conditional rendering):

1. Declare a `let` variable called `counter` with an initial value of 0. Increment it by 1 three times using the `++` operator, then log the result.
2. Create a `const` variable for the speed of light in m/s (`299792458`). Attempt to change it and note what error is shown.
3. Declare a variable `distance` as `150` and `time` as `3`. Calculate and store the average speed in a new variable.
4. Create two variables `price` and `taxRate`. Calculate the total price including tax and store it in `totalPrice`.
5. Use template literals to create a sentence using `let name = "Sam"` and `let age = 15` that reads: *Sam is 15 years old.*
6. Store the string "JavaScript" in a variable, then find and log the length of the string.
7. Declare a `let` variable with a decimal number. Multiply it by an integer and round the result using `Math.round()`.
8. Create a variable that stores the result of `(10 + 5) * 3` and explain the role of parentheses.
9. Declare a variable with the value `"100"` (string). Add it to `50` and log the result. Then convert it to a number and add `50` again.
10. Use `const` to store an array of three colors. Change the second color in the array and explain why this is allowed.
11. Create a variable that stores the square root of 81 using `Math.sqrt()`.
12. Use `let` to declare two variables, `p` and `q`, and assign them values. Then perform and log results for addition, subtraction, multiplication, and division.
13. Store your birth year in a variable. Subtract it from the current year to find your age.
14. Create a variable with the value `"apple,banana,orange"` and split it into an array.
15. Declare a `let` variable with the value `true`. Convert it to a string and log its type.
16. Use `Number()` to convert the boolean `false` to a number and log the result.
17. Declare a variable `num` with a value of 7, then raise it to the power of 3 using `**`.
18. Store the result of `25 % 4` in a variable and explain what it represents.
19. Create a variable holding `"HELLO WORLD"` and convert it to lowercase.
20. Use `const` to store an object with properties `title` and `pages`. Change the `pages` value and log the result.