**Exercise: Advanced use of operators**

**Task 1: Using the logical && operator**

You are coding an RPG game, where each character has certain skill levels based on the value saved in their score.

1. Create a variable named **score** and set it to **8**
2. Use **console.log()** that includes the string **"Mid-level skills:"** and compares the **score** variable to above **0** and below **10** using the **&&** operator

The expected output in the console should be: **"Mid-level skills: true"**.

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**Task 2: Using the logical || operator**

Imagine you are coding a video game. Currently, you’re about to code some snippets related to the game over condition.

You need to code a new variable named **timeRemaining** and set it to **0**. You also need to code a new variable named **energy** and set it to **10**.

Next, you should write a piece of code that could be used to determine if the game is over, based on whether either the value of the **timeRemaining** variable is **0** or the value of the **energy** variable is **0**.

Complete the task using the following steps:

1. Declare the variable **timeRemaining**, and assign the value of **0** to it.
2. Declare the variable **energy**, and assign the value of **10** to it.
3. Console log the following parameters: **"Game over: "**, and **timeRemaining == 0 || energy == 0**

**Note** that the expected output in the console should be: **"Game over: true"**.

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Try changing the **timeRemaining** variable to anything above **0** and then see how it affects the result.

**Task 3: Using the modulus operator, %, to test if a given number is odd**

You need to code a small program that takes a number and determines if it's an even number (like 2, 4, 6, 8, 10).

To achieve this task, you need to declare six variables, as follows:

1. The first variable, named **num1,** should be assigned a number value of **2**.
2. The second variable, named **num2**, should be assigned a number value of **5**.
3. The third variable, named **test1**, should be assigned the calculation of **num1 % 2**. **Note**: executing this code will return a number.
4. The fourth variable, named **test2**, should be assigned the calculation of **num2 % 2**. **Note**: executing this code will also return a number.
5. The fifth variable, named **result1**, should be assigned the result of comparing if the number stored in the **test1** variable is not equal to **0**, in other words, this: **test1 == 0**.
6. The sixth variable, named **result2**, should be assigned the result of comparing if the number stored in the **test2** variable is not equal to **0**, in other words, **test2 == 0**.

Run console log two times after you've set the variables:

1. The first console log should have the following code between parentheses: **"Is", num1, "an even number?", result1**
2. The second console log should have the following code between parentheses: **"Is", num2, "an even number?", result2**

**Note**: The output to the console should be as follows:

**Is 2 an even number? true**

**Is 5 an even number? false**

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Try it yourself with different values to explore the modulus operator.

**Task 4: Add numbers using the + operator**

Console log the result of adding two numbers, **5** and **10**, using the **+** operator.

**Note**: This task should be completed on a single line of code. The output in the console should be **15**.

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**Task 5: Concatenate numbers and strings using the + operator**

Code three variables:

1. The first variable should be a string with the following value: **"Now in "**. Name the variable **now**.
2. The second variable should be a number with the value: **3**. Name the variable **three**.
3. The third variable should a string with the following value: **"D!"**. Name the variable **d**.
4. Console log the following code: **now + three + d**.

**Note**: The expected output should be: **"Now in 3D!"**.

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**Task 6: Use the += operator to accumulate values in a variable**

Code a new variable and name it **counter**, assigning it to the value of **0**.

On the next line, use the **+=** operator to increase the value of counter by **5**.

On the next line, use the **+=** operator to increase the value of counter by **3**.

On the fourth line, console log the value of the **counter** variable.

**Note**: The output value should be **8**.

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