

Session 3: Practice Problems

Concept Questions

1. Explain how the **and**, **or**, and **not** blocks are used with boolean values.
2. How are reporters and predicate blocks similar? What makes them different?
3. What is a script variable? How do you make one and how do you change its value?
4. What are some common reasons you might use a script variable?
5. What is a constant and why would you make one? Give an example.

Programming Assignments

Number Guessing Game

Load this starter [NUMBER GUESSING GAME](#).

Look through the code to get an understanding of how it works. The game is not that cool yet. In this assignment, we are going to make the game much more like playing the number-guessing game with a person!

Here are six challenges to make the code act more like a human. If you think of anything else that would make it cooler, feel free to add it in. Try each of these in order. When you are done, your finished code should be able to deal with all of the challenges.

Challenge #1: The sprite should welcome the player and ask for their name before beginning.

Challenge #2: If they guess incorrectly, the sprite should tell them that they are incorrect, using their name. For example, if Colleen is playing the game, the sprite should say something like “Sorry Colleen, that is not the right answer.” before asking them to guess again.

Challenge #3: If they guess incorrectly, the sprite should tell them if the secret number is bigger or smaller than the number that they guessed.

Challenge #4: Right now, the script always picks a number between 1 and 10. Change this so that it picks a number between 1 and a variable named maximum. Ask the player what they would like the maximum number to be, before choosing a random number. Use this maximum number as the highest number that the script will choose.

Challenge #5: Keep track of how many guesses it takes before the player guesses the right number.

Challenge #6: When the player guesses the secret number, tell them how many guesses it took, and congratulate them using their name.