Name: _____ **Date:** _____

Answer Key: Robo-Robot's Secret Recipes: A Kindergarten Coding Quest

Evaluate logical sequences and debug complex snack-making loops using critical thinking skills designed for advanced early learners.

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1. Chef Bot is making a fruit salad. He follows a Loop: 'Add Apple, Add Grape.' He does this 3 times. What is the last thing he puts in the bowl?

Answer: B) Grape

In a loop of 'Apple, Grape,' the Grape is always the second (final) step of each repeat.

2. If a robot has a Condition that says 'Only walk if the light is Green,' the robot will stop if it sees a Red light.

Answer: A) True

Conditionals check if a rule is met; if the color isn't green, the 'walk' action cannot happen.

3. You have a Variable box named 'ToyCount' holding 5 cars. If you add 2 more cars, what is the new value of 'ToyCount'?

Answer: C) 7

Variables store information that can change. 5 plus 2 equals 7.

4. A Function called 'BrushTeeth' includes: 'Get Brush, Add Paste, Scrub.' Why do we use a Function name instead of saying every step?

Answer: C) To save time by grouping steps

Functions group instructions together so we can repeat a complex task easily using one name.

5. Look at this broken Loop: 'Step Left, Step Right, Jump.' The robot keeps hitting a wall on the left. How should you fix (debug) the logic?

Answer: A) Remove 'Step Left' from the loop

Debugging requires analyzing the failure; removing the 'Step Left' command prevents the robot from hitting the wall.

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6. A Condition says: 'IF it is raining, wear a Coat. ELSE, wear a T-shirt.' If it is SUNNY, what should the robot wear?

Answer: B) T-shirt

The 'Else' part of a conditional handles what happens when the first rule (raining) is not true.

7. A Loop is used when we want a computer to do a task only one time and then never do it again.

Answer: B) False

Loops are specifically for repeating actions multiple times, not for one-time events.

8. Two robots have a Variable named 'Energy.' Robot A has 10. Robot B has 2. Which robot needs a 'Charge' Function first based on logic?

Answer: B) Robot B

Comparing values is a key part of programming; the lower number indicates lower energy.

9. You create a Function called 'Dance' that is 'Twirl, Clap.' If you code: 'Dance, Dance', how many times do you clap?

Answer: B) 2

Each time the function is called, all steps inside it run. Two calls mean two claps.

10. In programming, if you put instructions in the wrong order, the robot might fail even if the instructions are good.

Answer: A) True

Sequence is vital; for example, you cannot 'Add Paste' before you 'Get Brush' in a toothbrushing logic flow.