

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Answer Key: Tiny Robots, Big Rules: A 1st Grade Logic Adventure

Decomposition, sequencing, and debugging — the core logic skills required to help a digital friend finish its chores and solve tricky puzzles.

**1. A robot needs to put on its shoes. It has a 'Function' called TIE\_SHOES. If the robot forgets to put the shoes on its feet first, what happens?**

**Answer:** C) The robot tries to tie the laces in the air (a bug).

Computers follow steps in a specific order (sequence). If a step is missing or out of order, it creates a mistake called a bug.

**2. In a game, you have a box named 'StickerCount'. Every time you win, the number inside changes from 2 to 3. This box is called a \_\_\_\_\_.**

**Answer:** B) Variable

A variable is like a container or box that holds information that can change, such as a score or a count.

**3. True or False: A robot uses a 'Condition' to decide whether to carry an umbrella by checking if it is raining outside.**

**Answer:** A) True

Conditionals (If/Then) allow a program to make decisions based on specific information, like the weather.

**4. You want a dancer to clap 100 times. Instead of writing 'Clap' 100 times, which tool should you use to save time?**

**Answer:** C) A Loop

Loops are used to repeat an action many times without having to write the instruction over and over.

**5. If your code tells a robot to 'Walk forward' but there is a wall in the way, the robot stops. This error in your plan is called a \_\_\_\_\_.**

**Answer:** D) Bug

In programming, any mistake that prevents the program from working correctly is called a bug.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**6. True or False: A 'Function' is a set of steps you give a name to so you can use those steps again and again easily.**

**Answer:** A) True

Functions group instructions together under one name, like 'GIVE\_HUG', so the computer knows all the small steps involved.

**7. Identify the 'Condition' in this rule: 'If the plate is empty, then put it in the sink.'**

**Answer:** B) The plate is empty

The condition is the 'If' part; it is the specific situation the computer checks before doing an action.

**8. A chef has a recipe called 'Make\_Pizza'. In coding, this group of organized steps is known as a \_\_\_\_\_.**

**Answer:** C) Function

Just like a recipe, a function is a named collection of steps that achieves a specific goal.

**9. True or False: If you change the number in a Variable, the computer forgets the old number and only knows the new one.**

**Answer:** A) True

When a variable is updated with a new value, it replaces the old data stored in that memory 'box'.

**10. Look at these steps: 1. Open door. 2. Walk through. 3. Close door. If you switch steps 1 and 2, what happens?**

**Answer:** A) The robot walks through the closed door and crashes.

Computers need precise sequences. Trying to walk through a door before opening it is a logical error in the sequence.