Debugging 1 Worksheet

For each question, explain why the script does not work (where is the bug?) and draw a debugged script (one that works correctly).

1. What is a “bug”?

2. What is “debugging”?

3. What is “single stepping”?

4. We want the sprite to draw a rectangle. Draw a circle around the bug(s), then explain and fix the problem.

   **Buggy Script**
   ```plaintext
   pen down
   go to x: 0 y: 100
   go to x: 150 y: 105
   go to x: 150 y: 0
   go to x: 0 y: 0
   ```

   **Debugged Script**
   ```plaintext
   ```

   **Result**
   ![Result Image]

   **Explanation of bug(s):**

5. We want the sprite to draw a rectangle. Draw a circle around the bug(s), then explain and fix the problem.

   **Buggy Script**
   ```plaintext
   pen down
   repeat 4
   move 100 steps
   turn 100 degrees
   ```

   **Debugged Script**
   ```plaintext
   ```

   **Result**
   ![Result Image]

   **Explanation of bug(s):**
6. We want the sprite to draw a smaller square inside a larger square, but there’s an extra line! Draw a circle around the bug(s), then explain and fix the problem.

<table>
<thead>
<tr>
<th>Buggy Script</th>
<th>Result</th>
<th>Debugged Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>pen down; go to x: 0 y: 0; clear; go to x: 0 y: 150; go to x: 150 y: 150; go to x: 150 y: 0; go to x: 0 y: 0; go to x: 50 y: 50; go to x: 50 y: 100; go to x: 100 y: 100; go to x: 100 y: 50; go to x: 50 y: 50; go to x: 0 y: 0</td>
<td>![Result]</td>
<td></td>
</tr>
</tbody>
</table>

Explanation of bug(s):

7. We want the sprite to draw a house with a door. Draw a circle around the bug(s), then explain and fix the problems.

<table>
<thead>
<tr>
<th>Buggy Script</th>
<th>Result</th>
<th>Debugged Script</th>
</tr>
</thead>
<tbody>
<tr>
<td>pen down; go to x: 0 y: 0; clear; go to x: 0 y: 100; go to x: 100 y: 175; go to x: 225 y: 100; go to x: 200 y: 0; go to x: 175 y: 0; go to x: 175 y: 50; go to x: 100 y: 50; go to x: 150 y: 0</td>
<td>![Result]</td>
<td></td>
</tr>
</tbody>
</table>

Explanation of bug(s):