This quiz has 3 questions, for a total of 10 points.

1. **3 points** Suppose the Flood-It! board is in the below configuration. How many tiles are in the `flooded_list`? If the player chooses purple, how many tiles will be added to the `flooded_list`?

   ![Flood-It! Board](image1.png)

   **Solution:** There are 9 tiles in the `flooded_list` (1 point). Choosing purple will add 7 tiles to the `flooded_list` (1 point for the directly adjacent tiles and 1 point of the tiles 2 or more away).

2. **4 points** What is the output of the following Python program?

   ```python
   # Python code here
   ```
A = []
A.append((1,2))
A.append(3)
print(A)
print(1 in A)
print(3 in A)
A[1] = 4
print(A)

Solution:
[(1, 2), 3]
False
True
[(1, 2), 4]

Grading rubric: after the appends, A is [(1, 2), 3] (1 point). So 1 is not in A (1 point) but 3 is (1 point). The assignment to A[1] causes A to become [(1, 2), 4] (1 point).

3. **3 points** What code needs to be filled into the blanks labeled (a), (b), and (c) to finish this algorithm that rotates the elements in a non-empty array by one to the right?

```python
def rotate_1_swap_bkwd(A):
    i = len(A) - 1
    while ___(a)___:
        swap(A, i, ___(b)___)
        i = ___(c)___
```

Solution: Grading rubric: 1 point per blank.

a) i != 0
b) i - 1
c) i - 1