| Name: | Date: | Period: |
| :--- | :--- | :--- |

## Lab11: Random Tree

- Repeat in a loop:
- Start your turtle at the base of the tree.
- Face straight up on a heading of 90 degrees.
- Repeat in another loop:
* Move $n$ pixels.
* Flip a coin:
- Either turn left $\theta$ degrees...
- ...or turn right $\theta$ degrees.
* Decrease $n$ before the next branch.
- For each trial of the outer loop, count the number of new pixels drawn by the inner loop and the total (cumulative) number of new pixels from all previous trials, too.
- Sketch both the new pixels per trial and the total new pixels over all trials.
- After how many trials does it make sense to stop?


## Official Use Only

| Header: | Name | Correct Date | Program Description |
| :--- | :--- | :--- | :--- |
| Style: | Comments | Variable Names | Modular |
| Data Structures: | Obvious | General | Lean |
| Algorithm: | Clear | Correct | Efficient |
| Scoring: | Raw | Late | Total |
| CS Principles |  |  |  |

