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

## TurtleTree Worksheet

1. Draw the translation from the English to the code.

***// Turn the background black.***

Tortoise.*getBackgroundWindow().*setColor(Colors.Grays.*Black*);

1. Draw the translation from the English to the code.

***// Move the tortoise backward the length of the current branch***

Tortoise.*move*(-length);

***(Continues on next page…)***

1. Do the following for the code below:

|  |  |
| --- | --- |
| **public** **class** TurtleTree  {  **public** **static** **void** **main**(String[] args)  {  Tortoise.*setSpeed*(10);  Tortoise.*getBackgroundWindow*().setBackground(Colors.Grays.*Black*);  **int** branchLength = 60;  *drawBranch*(branchLength);  }  **public** **static** **void** **drawBranch**(**int** branchLength)  {  **if** (branchLength > 0)  {  *adjustColor*(branchLength);  Tortoise.*move*(branchLength);  *drawLowerBranches*(branchLength);  }  }  **public** **static** **void** **adjustColor**(**int** branchLength)  {  HashMap<Integer, Color> colors = **new** HashMap<Integer, Color>();  colors.put(10, Colors.Greens.*Lime*);  colors.put(20, Colors.Greens.*ForestGreen*);  colors.put(30, Colors.Greens.*DarkGreen*);  colors.put(40, Colors.Greens.*Olive*);  colors.put(50, Colors.Browns.*Sienna*);  colors.put(60, Colors.Browns.*SaddleBrown*);  Tortoise.*setPenColor*(colors.get(branchLength));  }  **public** **static** **void** **drawLowerBranches**(**int** branchLength)  {  Tortoise.*turn*(30);  *drawShorterBranches*(branchLength);  Tortoise.*turn*(-60);  *drawShorterBranches*(branchLength);  Tortoise.*turn*(30);  *adjustColor*(branchLength);  Tortoise.*move*(-branchLength);  }  **public** **static** **void** **drawShorterBranches**(**int** branchLength)  {  *drawBranch*(branchLength - 10);  }  } | 1. Circle the all of the lines of code that make the Tortoise move backwards (counter-clockwise). 2. How many different variables are in this code that are called branchLength? \_\_\_\_\_\_\_\_\_\_\_\_\_ 3. Circle each place where a new variable of the name branchLength is declared. 4. Draw arrows to show the flow of code execution |