

## Quiz 2

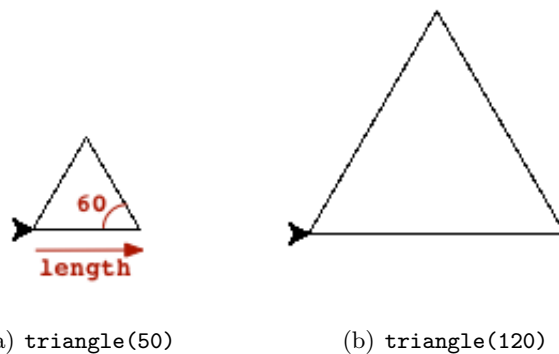
## Submission

You must submit one ZIP file on Autolab. This ZIP file must be named `userid-quiz2.zip` and must include all of the Python files that you have written for this assignment. Please write your name and `userid` as a comment at the beginning of each Python file.

## Recommendations

- Make sure to test your program.
- Make sure that your program is executable. If you are unable to complete portions of the quiz, comment out the part of the code that does not work properly, and explain what you did, what worked, and what did not. It is your responsibility to explain as carefully as you can why you think you were unable to get the code working, what you think is wrong, and how you might go about fixing it. The quality of such an explanation will be important to us in deciding whether to give you partial credit.
- You can reuse any piece of code developed in class and assignments.

## 1 Triangle [10 points]

Figure 1: `triangle(length)`

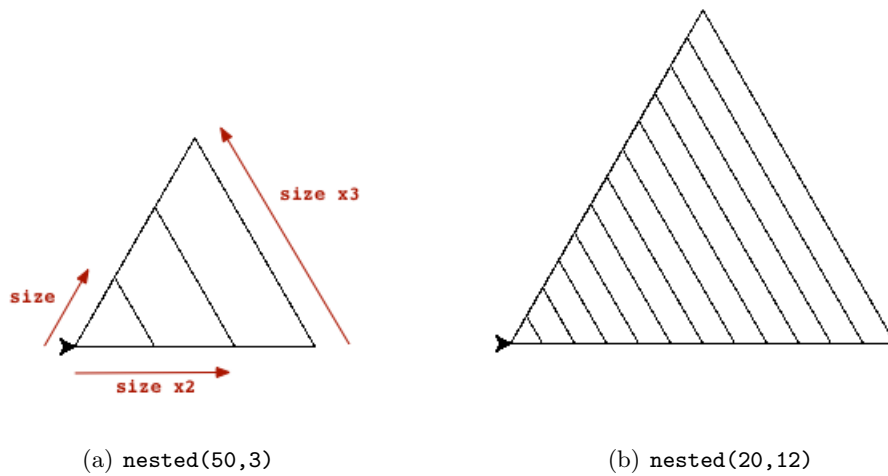
Write a function `triangle(length)` that draws an equilateral triangle.

- `length` is the length of the triangle faces.

**Instructions:**

- The triangle should be **equilateral**
- The turtle should go back to its original position and original heading. Note that you should **not** use the method `home` for that.

## 2 Nested triangles [40 points]

Figure 2: `nested(size, nbtri)`

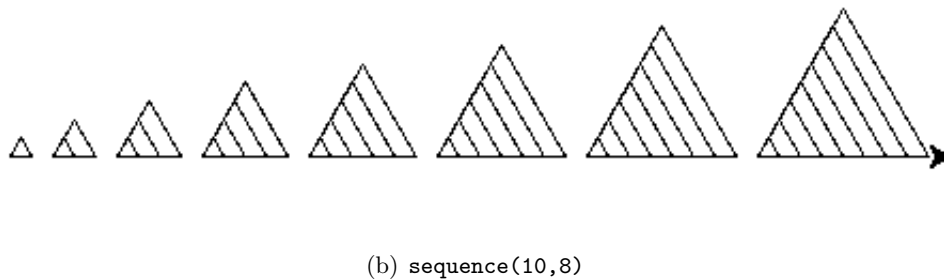
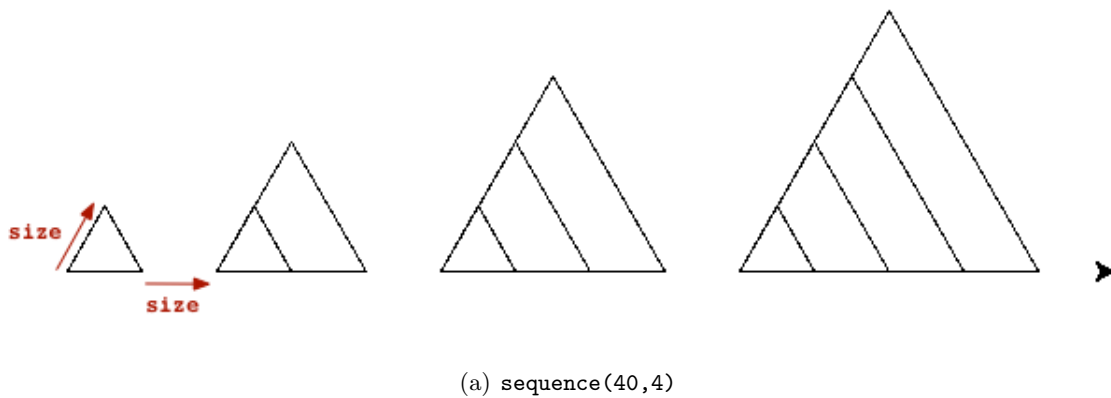
Write a function `nested(size, nbtri)` that draws nested equilateral triangles.

- `size` is the length of the smallest triangle.
- `nbtri` is the number of nested triangles.

### Instructions:

- Each triangle should be one size bigger than the previous one.
- Your code should use the function `triangle` defined in exercise 1.

### 3 Triangle sequence [50 points]

Figure 3: `sequence(size, maxtri)`

Write a function `sequence(size, maxtri)` that draws a sequence of nested triangles.

- `size` is the size of the nested triangle.
- `maxtri` is the number of nested triangles of the leftmost nested triangle.

#### Instructions:

- The leftmost nested triangle has only one triangle.
- The rightmost nested triangle should have `maxtri` numbers of triangles.
- In between, each nested triangle has one more nested triangle than the previous one.
- The distance between two nested triangles should **be equal** to `size`.
- Your code should use the function `nested` defined in exercise 2.