Using a Generator Function

```
>>> for i in syracuse_iter(3):
…       print(i)
3
10
5
16
8
4
2
1
```

Syracuse Function Sequences

```
>>> list(syracuse_iter(3))
[3, 10, 5, 16, 8, 4, 2, 1]
>>> list(syracuse_iter(5))
[5, 16, 8, 4, 2, 1]
>>> list(syracuse_iter(6))
[6, 3, 10, 5, 16, 8, 4, 2, 1]
>>> list(syracuse_iter(13))
[13, 40, 20, 10, 5, 16, 8, 4, 2, 1]
```

- See the pattern? From 5, we know the rest.
- Generally, from any number we've already seen, we know the rest.