

If you finish early

Write a method that takes an `Enumerator` as input and returns the sum of the values that the `Enumerator` returns. Define a class called `Enumerator`, that "lists" all integers from a low to a high value. The following shows a sample usage.

```
e = new Enumerator(3, 5);
e.hasNext()           returns true
e.next()              returns 3
e.next()              returns 4
e.hasNext()           returns true
e.next()              returns 5
e.hasNext()           returns false
```

Write a method that runs much slower than `fib`. (Not just twice as slow or 100 times as slow, etc. Hint: Look up Ackermann's function.)

- Write `fastFib`, which finds the n^{th} Fibonacci number *much* faster than `fib`.
- Write a terminating recursive method that doesn't use an `if` statement.
- Improve your `sqrt` stopping condition to handle the square roots of 3, 8, 15, 24, etc., correctly.