

Intro to Algorithms

Homework

Rational Numbers

The Assignment

Implement "Creative Problem", 1.2.16 (Sedgewick, pg 117). You do not have to "include a test client to exercise all of your methods" because I will test your code myself. In other words: I urge you to code, but you do not need to ship, a test client to exercise all of your methods.

You must also define and implement the following two API methods:

- `public long numerator();`
- `public long denominator();`

NOTE: Because of the "no common factors" requirement, these methods may not necessarily return the values that were supplied to the constructor.

Packaging

Assume that you've installed your YU Git repo in a directory named `GIT`.

- Your homework assignments for this course must be rooted in `GIT/IntroToAlgorithms/homework`. I'll refer to this directory as `ROOT`.
- Your code will reside in a package named `edu.yc.oats.algs`.
- Your code for this assignment will be rooted in: `ROOT/RationalNumbers`. I'll refer to this directory as `DIR`.
- Your class must be named **Rational.java**, and it must reside in `DIR/src/main/java/edu/yc/oats/algs`.
- Your assignment may not use any external libraries: just the SDK and your code in this package.

Grading

- If your code cannot be compiled & run (either because it doesn't follow the packaging conventions above, or because of a compilation bug) -- **automatic 0** for the assignment
- If your code runs, but doesn't pass my tests, you'll get a *maximum* of 8. The actual grade will depend on how close your code was to passing the tests.
- If your code runs, passes the tests, but is "really ugly", you get a 9.
- Maximum grade is 10.