

Lesson 49: Code Walk through Fraction.java (W16D3)

Balboa High School

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Do Now

- Read §1 of PS #9
- Skim the remainder of the problem set

Students will examine Litvin's `Fraction.java`, noting its use of overloaded methods. After a joint code walk, students will work on a programming exercise in which they extend `Fraction.java`.

Keep An Eye Out for...

`Fraction.java` has features that you'll be learning about in this problem set.

- Copy Constructors
- Overloaded Methods (including constructors)
- Throwing Exceptions¹

¹We only cover this topic lightly for now.

Code Walk-Through of Fraction

- Browse to [Fraction.html](#)
- Let's figure out how this class works. . .
- I'll point out notable features that you'll read more about in the textbook.

- 1 Download `Fraction.java` from [here](#) and import into a new project called `Lesson49`.
- 2 Add a `main()` to `Fraction.java`, and have it do the following:
 - 1 Create a `Fraction` whose value is $\frac{3}{8}$ and print it out
 - 2 Create a `Fraction` whose value is $\frac{5}{15}$ and print it out. Prepare to explain why the printed value isn't $5/15$!
 - 3 Multiply the `Fractions` from 1 and 2, printing the resulting `Fraction's` value

Work on PS #9, §2.2. What follows is the text from Litvin Ch. 10, #6.

6. Add subtract and divide methods to the Fraction class and test them. If the parameter for the divide method is a zero fraction, divide should throw an IllegalArgumentException.

If you complete §2.2 during class, run the autotester for a sign-off.

- Do the required reading for PS #9, §§2–3 (Litvin §§10.1–10.2)
- Finish PS #9, §3.2