# Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_Points \_\_\_\_\_ AP Computer Science

## Sammamish High School

# Java Project #1 Checkpoint #3 Check List

**Checkpoint 3 theme**: One fully-functional operation

**Good coding practices** (2 points)

* 1 point: Meaningful variable names used throughout
* 1 point: No multiline stretches of duplicate code that could be factored out to a method

**Operation** (6 points)

If addition is the operation:

* 1 point: Simple fractions, same denominator: 1/7 + 3/7 = 4/7
* 1 point: Simple fractions, different denominators: 1/3 + 1/5 = 8/15
* 1 point: Simple fractions, result reduced: 1/2 + -5/6 = -1/3
* 1 point: Whole numbers: 103 + 20 = 123
* 1 point: Mixed fractions: 4\_15/16 + -3\_11/16 = 1\_1/4
* 1 point: Improper fraction, zero result: 1\_3/10 + -13/10 = 0

If multiplication is the operation:

* 1 point: Simple fractions, same denominator: 1/7 \* 3/7 = 3/49
* 1 point: Simple fractions, different denominators: 1/3 \* -1/5 = -1/15
* 1 point: Simple fractions, result reduced: 1/2 \* 2/3 = 1/3
* 1 point: Whole numbers: 3 \* -1 = -3
* 1 point: Mixed fractions: 1\_11/25 \* 3\_1/8 = 4\_1/2
* 1 point: Improper fraction, unit result: 3/10 \* 10/3 = 1

If subtraction is the operation, use addition test cases but negate second number

If division is the operation, use multiplication test cases but use reciprocal of second number

If, during grading, code inspection or testing identifies a different case in a category above that doesn’t work even though the specific case above does work, the corresponding point is not earned.

**Test cases (2 points)**

* 1 point: Student has a list of test cases, on paper or in code, beyond the rubric cases above
* 1 point: Student test cases include positive, negative, and zero values for first and second input number; positive, negative, and zero results; and whole number, mixed fraction, and simple fraction results.

**Not graded in this checkpoint**

0 points: More than one operation, extra credit functionality