

## Section Activity #5: Using `assert` to Test Pre-Conditions

Your Names: \_\_\_\_\_

**Directions:** In groups of two (or three, if need be), complete the following activity. This section activity will be graded; all students in the group will receive the same score. Make sure that the names of all group members are on the page you submit to your section leader. Section Meeting 9 (2014/03/11-12)

**Task:** Complete the following Java method that computes the area of a triangle using Heron's formula:  $\text{area} = \sqrt{s(s-a)(s-b)(s-c)}$ , where the sides of the triangle have lengths  $a$ ,  $b$ , and  $c$ , and its semi-perimeter  $s = \frac{a+b+c}{2}$ . Include `assert` statements that verify the precondition (the given values of  $a$ ,  $b$ , and  $c$  can actually form a triangle) and postcondition (the area is positive).

```
1 private static double computeTriangleArea (double a, double b, double c)
2 {
3     double area, // area of the triangle with side lengths a, b, and c
4         s;      // the triangle's semi-perimeter
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35     return area;
36 }
```