

# Test report “Triangle”

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## Implementation background

The method triangle makes use of helper methods to determine the return value. For each possible value that is defined in the data type Shape except Other, a helper function exists with the type definition  $\text{Integer} \rightarrow \text{Integer} \rightarrow \text{Integer} \rightarrow \text{Bool}$ .

The helper functions have been tested manually independent from each other. The order precedence was taken over from the order in the definition of the data type Shape.

This is an overview on the test data that was used in the individual testing. Positive test-data lead to positive test results, negative data lead to negative results (as expected).

Helper-function	Positive test-data	Negative test-data
isTriangle	2 2 3 ; 3 4 5 ; 9 9 9	1 2 3 ; 1 1 9 ; 1 4 9
isEquilateral	2 2 2 ; 5 5 5 ; 9 9 9	1 5 5 ; 1 2 3 ; 3 4 5
isIsocles	1 5 5 ; 2 2 3 ; 4 3 4	1 2 3 ; 3 4 5 ; 9 7 3
isRectangular	3 4 5 ; 6 8 10	2 2 2 ; 1 5 4 ; 1 2 3

Individual testing made selecting negative test-data easier, because the test-cases would not block each other. This way it was also possible to test the helper-functions with data, which they would not be exposed to when exclusively used in the context of the triangle function.

After the individual tests, the correctness of the function triangle was also manually tested with the examples that were used in the individual tests.

Time spent: 2 h