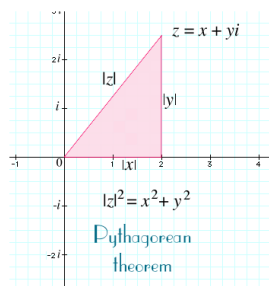# MATH 147 Review: The Modulus

Facts to Know

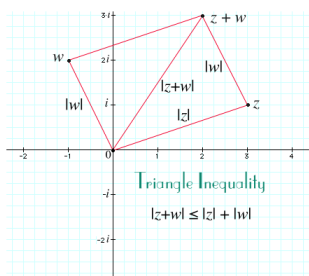The Modulus for Real Numbers

The Modulus for Complex Numbers

Basic Properties

- nonnegativity

- definiteness

- homogeneity

Triangle Inequality

Reverse Triangle Inequality

Examples

1. Compute $|z + w|$, $|z|$, and $|w|$ where $z = 1 - 3i$ and $w = 1 + 4i$. Verify that the triangle inequality and the reverse triangle inequality hold.

2. Compute $|z \cdot w|$ where $z = 1 - 3i$ and $w = 1 + 4i$.