Classic Style

Theorem 1 *Pythagorean*

In a right triangle with legs a and b and hypotenuse c:

$$a^2 + b^2 = c^2$$

Definition 1

A **continuous function** is one where small changes in input produce small changes in output.

Lemma 1

If f is continuous at a, then f is bounded in some neighborhood of a.

Remark

This result generalizes to higher dimensions.

Example 1

Consider $f(x) = x^2$. Then $f(2) = 4$.

Proof. By direct calculation and the definition of continuity. □