Template

1 tcolorbox example

Theorem 2.4

If f is a differentiable function and c is a real number, then cf is also differentiable and

$$\frac{d}{dx}\left[cf(x)\right] = cf'(x)$$

$\varepsilon - \delta$ definition of limit

Let f be a function defined on an open interval containing c (except possibly at c), and let L be a real number. The statement

$$\lim_{x\to\infty} f(x) = L$$

means that for each $\varepsilon > 0$ there exists a $\delta > 0$ such that if

$$0 < |x - c| < \delta$$

then

$$|f(x) - L| < \varepsilon$$

Example 1. Evaulating Basic Limits

$$\lim_{x\to\infty} 3 = 3$$