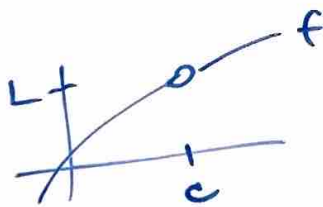
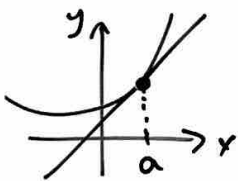


The Limit



$$\lim_{x \rightarrow c} f(x) = L$$

The Derivative



$$f'(a) = \left. \frac{dy}{dx} \right|_{x=a} = \lim_{h \rightarrow 0} \frac{f(a+h) - f(a)}{h}$$

FTOC



$f'(a)$ is slope of tangent line at $x=a$

The Definite Integral



$$\int_a^b f(x) dx = \lim_{n \rightarrow \infty} \sum_{i=1}^n f(x_i) \Delta x$$

$n \rightarrow \infty$ is $\Delta x \rightarrow 0$

where $\Delta x = \frac{b-a}{n}$, $x_i = a + i\Delta x$

$\int_a^b f(x) dx =$ signed area between graph and x -axis

FTOC I $\int_a^b f(x) dx = F(b) - F(a)$, where $F' = f$.

FTOC II $\frac{d}{dx} \int_a^x f(t) dt = f(x)$