

Intermediate Value Theorem

1. Definition

Let f be a function defined on the interval $[a, b]$.

If $f(a) < 0$; $f(b) > 0$; f is continuous on $[a, b]$.

Then, $\exists c \in (a, b)$ such that $f(c) = 0$.



Let f be a function defined on the interval $[a, b]$; Let $M \in \mathbb{R}$.

If $f(a) < M < f(b)$; f is continuous on $[a, b]$.

Then $\exists c \in (a, b)$ such that $f(c) = M$.

