1. (2 points each, no partial credit) For the following statements circle True or False. Circle True only if the statement is always true.
(a) If $y$ is differentiable for all $x$, then the value of $y^{\prime}(x)$ is a unique number for each $x$.
True False
(b) The only antiderivative of $\cos (x)$ is $\sin (x)$.

## True

False
(c) For a continuous function $f$ on the interval $a \leq x \leq b$, if the left-hand sum and the right-hand sum are equal for a given number of subdivisions, then they are equal to $\int_{a}^{b} f(x) d x$.

> True

## False

(d) For the continuous function $f$, if the units of $t$ are seconds and the units of $f(t)$ are meters, then the units of $\int_{0}^{1} f(t) d t$ are meter seconds.

> True False
(e) For any function $f$, if $\lim _{x \rightarrow 3^{-}} f(x)=a$ and $\lim _{x \rightarrow 3^{+}} f(x)=a$, then $f(3)=a$.


#### Abstract

True


False

