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 \( y'(x) \) is a unique number for each \( x \).

True \hspace{2cm} False

(b) The only antiderivative of \( \cos(x) \) is \( \sin(x) \).

True \hspace{2cm} 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 \( \int_a^b f(x)dx \).

True \hspace{2cm} 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 \( \int_0^1 f(t)dt \) are meter seconds.

True \hspace{2cm} False

(e) For any function \( f \), if \( \lim_{x \to 3^-} f(x) = a \) and \( \lim_{x \to 3^+} f(x) = a \), then \( f(3) = a \).

True \hspace{2cm} False