

**THE UNIVERSITY OF AKRON**  
**Theoretical and Applied Mathematics**

**Exerquiz Package**  
**Quizzes with Points**

**D. P. Story**

## 1. Quiz Environment

Answer each of the following. Passing is 100%.

- (6<sup>pts</sup>) If  $\lim_{x \rightarrow a} f(x) = f(a)$ , then we say that  $f$  is...  
differentiable                      continuous                      integrable
- (6<sup>pts</sup>) Name *one* of the two people recognized as a founder of Calculus.
- (8<sup>pts</sup>)  $\frac{d}{dx} e^{x^2} =$

Answers:

Points:

Percent:

## Solutions to Quizzes

**Solution to Quiz:** A function  $f$  is said to be continuous at  $x = a$  if  $x \in \text{Dom}(f)$ ,  $\lim_{x \rightarrow a} f(x)$  exists and  $\lim_{x \rightarrow a} f(x) = f(a)$ .

End Quiz

**Solution to Quiz:** Isaac Newton and Gottfried Leibniz are the co-creators of Calculus.

End Quiz

**Solution to Quiz:** First apply the rule for differentiating an the natural exponential, then apply the power rule:

$$\begin{aligned}\frac{d}{dx} e^{x^2} &= e^{x^2} \frac{d}{dx} x^2 \\ &= e^{x^2} (2x) \\ &= 2xe^{x^2}\end{aligned}$$

In the syntax of this document,  $2*x*e^{(x^2)}$ .

End Quiz