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## Abstract

The purpose of this article is to determine whether the Exerquiz package works properly with the Pdfscreen package of C. V. Radhakrishnan



# Experiments in Exerquiz

D. P. Story

March 13, 2002

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## 1. On-Line Exercises

A well-designed sequences of exercises can be of aid to the student. The `exercise` environment makes it easy to produce electronic exercises. By using the `forpaper` option, you can also make a paper version of your exercises. See the `Webeqman.pdf` reference manual.

**EXERCISE 1.** Evaluate the integral  $\int x^2 e^{2x} dx$ .





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### 3. Graded Quizzes with JavaScript

Click on “Ans” to see the answer, shift-click on “Ans” to jump to the solution.

**Begin Quiz** Answer each of the following. Passing is 100%.

1. If  $\lim_{x \rightarrow a} f(x) = f(a)$ , then we say that  $f$  is...  
differentiable                      continuous                      integrable
2. Name *one* of the two people recognized as a founder of Calculus.
3.  $\cos(\pi) =$
4.  $\int \sin(x) dx =$

**End Quiz**

Answers:



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## Solutions to Exercises

**Exercise 1.** We evaluate by integration by parts:

$$\begin{aligned}\int x^2 e^{2x} dx &= \frac{1}{2} x^2 e^{2x} - \int x e^{2x} dx && u = x^2, dv = e^{2x} dx \\ &= \frac{1}{2} x^2 e^{2x} - \left[ \frac{1}{2} x e^{2x} - \int \frac{1}{2} e^{2x} dx \right] && \text{integration by parts} \\ &= \frac{1}{2} x^2 e^{2x} - \frac{1}{2} x e^{2x} + \frac{1}{2} \int e^{2x} dx && u = x^2, dv = e^{2x} dx \\ &= \frac{1}{2} x^2 e^{2x} - \frac{1}{2} x e^{2x} + \frac{1}{4} e^{2x} && \text{integration by parts} \\ &= \frac{1}{4} (2x^2 - 2x + 1) e^{2x} && \text{simplify!}\end{aligned}$$

Exercise 1



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## Solutions to Quizzes

**Solution to Quiz:** Columbus sailed the ocean blue in 1492.

[End Quiz](#)



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**Solution to Quiz:** Columbus sailed the ocean blue in 1492.

End Quiz



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**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**



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



**Solution to Quiz:** Oh, come on now. You know that  $\cos(\pi) = -1$ .

End Quiz

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**Solution to Quiz:**

$$\int \sin(x) dx = -\cos(x) + C$$

End Quiz

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