

Math 696 Mathematics Test Suite*

© Prof. Michael S. Pilant

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1 Wide open spaces

This is how wide the page is!

From here to here!

There are exactly 5 spaces between word1 word2.

¶*Note:* Although there are 3 `\hskip` commands in this document, there are **NO** `\vskip` commands!

2 Mathematics

The following is the definition of the first derivative:

$$\lim_{x \rightarrow c} \frac{f(x) - f(c)}{x - c} = f'(c)$$

3 Arrays of Equations

$$\int_{\Omega} \nabla \cdot u(x, y) dx dy = \oint_{\partial\Omega} u ds \tag{1}$$

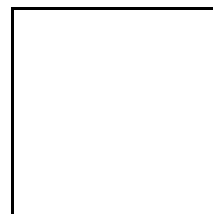
$$\text{where } \nabla \cdot u(x, y) \equiv \frac{\partial u}{\partial x} + \frac{\partial u}{\partial y} \tag{2}$$

*Project 2

Another very useful result is:

$$\begin{aligned}
 \left(\int_{-\infty}^{\infty} e^{-x^2} dx\right)^2 &= \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} e^{-(x^2+y^2)} dx dy \\
 &= \int_0^{2\pi} \int_0^{\infty} e^{-r^2} r dr d\theta \\
 &= \int_0^{2\pi} \left(-\frac{e^{-r^2}}{2}\Big|_{r=0}^{r=\infty}\right) d\theta \\
 &= \pi
 \end{aligned} \tag{3}$$

4 Space Filling

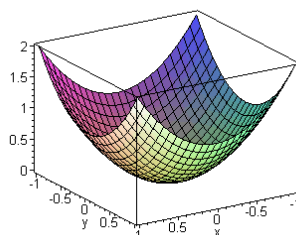


One inch away is a box which measures exactly 1" by 1":

A Special Characters

α	β	γ	δ	ε	ζ
η	θ	ι	κ	λ	μ
ν	ξ	\omicron	π	ρ	σ
τ	υ	ϕ	χ	ψ	ω

B Graphics



C Russian Alphabet [extra credit]

Hint: Lookup Cyrillic-HOWTO-7.html on the web

а б в г д е ё ж з и й к л м н о п р с т у ф х ц ч ш щ ь ы ь э ю я