What’s unique about me?

Nothing really. I just read something here, see something there and then try to relay the message to someone else. Something is always lost in translation. All the great articles, fantastic ideas of other people cease their uniqueness when they hit me. I don’t now why I’m being so hard on myself. I just get to feeling like I will never do anything of any importance, produce any *Great Work*. Of course, that makes me irritated at myself for feeling some stupid way about.

It’s the lousy weather, the impending maelstrom of the holiday season, the stress over college plans and financial worries. All these things distract me from whatever is supposed to be important. In *Recovery Speak*, we say that these things (weather, stress, plans, homework) are renting space inside my head. I keep kicking them out, much the way I have been kicked out so many times, but they keep coming back, showing up unannounced with some damn claim about *squatters rights*…

Is there anything unique about being a failure? In being an alcoholic? In being thoroughly disappointed in myself? No. I can’t even be original in my dejection.

Some new terms to wrap my head around as I delve deeper into differential equations, and trying become familiar with different means of publishing, but it’s so much easier to just write them by hand.

The Wronskian

$The Wronskian$

$$W\left(y_1, y_2\right)(x) = \left|\begin{matrix} y_1(x) & y_2(x) \\ y_1^{'}(x) & y_2^{'}(x) \end{matrix}\right| = y_1(x)\, y_2^{'}(x) - y_1^{'}(x)\, y_2(x)$$

Linear Independence

If y_1 and y_2 are two solutions of the equation
$y'' + p(x)\, y' + q(x)\, y = 0, then$
$W(y_1, y_2)(x) = W(y_1, y_2)(x)\, exp\left(-\int_{x_0}^{x} p(t)\, dt\right).$

Existence and Uniqueness

Formula does not parse

There is something wrong with the LaTeX plugin that the above equation does not render. “I tried nothing and I’m all out of ideas.” Is there a unique solution to this problem? Yes, the lousy plugin does not support some commands the way a fully functioning LaTeX script console would. I’ll stick to inserting my equations as graphics when I’m doing it here, but fro typing up papers I will have to practice with the coding.

Variation of parameters

I’m still reading this section of the notes, but as soon as I understand so will you. my oft disappointed readers. Unlike other methods, which are largely algebraic, this method involves integration. The process, no doubt, will fit the general pattern of trying to alter the form of the equation in some way as to make a known method applicable. It is the exception rather than the rule that entirely new “outside the box” methods are called for.

If y_1 and y_2 are two solutions of the equation $y'' + p(x)\,y' + q(x)\,y = 0$, *then*

$$W(y_1, y_2)(x) = W(y_1, y_2)(x)\, exp\left(-\int_{x_0}^{x} p(t)\,dt\right).$$

Let $\mathbb{R} = \{(x, y)\,; |x - x_0| \leq a, |y - y_0| \leq b\}$

Then there exists an Interval $\mathbb{I} = [x_0 - h, x_0 + h]$ such that

$\left\{y' = f(x, y), y(x_0) = y_0\right\}$ has a unique solution y(x) on I.

Is there a unique solution?

I am really enjoying this subject and everything I have been learning. It has been a while since I have tried to learn something totally new and I am glad that I am keeping up. Some new concept will arise and with it a solution of increasing complexity. It is a pattern that I recognize. What is the most exciting part is not the techniques of solving these incredibly useful and applicable equations, but rather my ability to anticipate the next challenge and it's solution. An example is, while doing some extra work on problems involving undetermined coefficients it became apparent that it would be necessary to alter the form in order to account for initial value conditions. I even proposed the idea that we include the solution to the corresponding homogenous equation in our solution to the particular one. While my ideas lack the formalism and training of the mathematician, per se, I correctly anticipated both the issue and it's logical (?) solution.

A perfect house for me!

One of a kind

All unique actually means is one of a kind. Nowhere in the definition does this imply that uniqueness is better, or worse, than commonness. For my part, I can wish things were this way or that and that and lament my sad state, but the truth is that everything I do and have ever done is unique. I'm pretty sure that no one has done things this way before, they would have to have been a damn fool. Can I predict my way out of this, can I anticipate the solution to the next challenge? In a way, yes. There's some comfort in that.

Misfit College Fund 2018

$56 of $1,975 raised

$ Donation Amount: 0

- $0
- Give a Custom Amount

Donate Now

Personal Info

First Name *

Last Name

Email Address *

Donate Now

Name(required)

Email(required)

Website

Message

Submit »

They take apart their nightmares and they leave them by the door
Let me fall out of the window with confetti in my hair
Deal out Jacks or Better on a blanket by the stairs
I'll tell you all my secrets, but I lie about my past
And send me off to bed for evermore

Author: earthboundmisfit75

Twitter Facebook Google+
TAGS: classroomexistenceLaTextheoremuniqueness

Share this:

- Click to share on Facebook (Opens in new window)
- Click to share on LinkedIn (Opens in new window)
- Click to share on Google+ (Opens in new window)
- Click to share on Twitter (Opens in new window)
- Click to share on Pinterest (Opens in new window)
- Click to share on Tumblr (Opens in new window)
- Click to share on WhatsApp (Opens in new window)
- Click to email this to a friend (Opens in new window)
- Click to print (Opens in new window)

Like this:

Like Loading...