



**Sweaty She Monday (10/26/09): Want Me To Giggle? Just Say Asymptote**  
**By Susan Farago**

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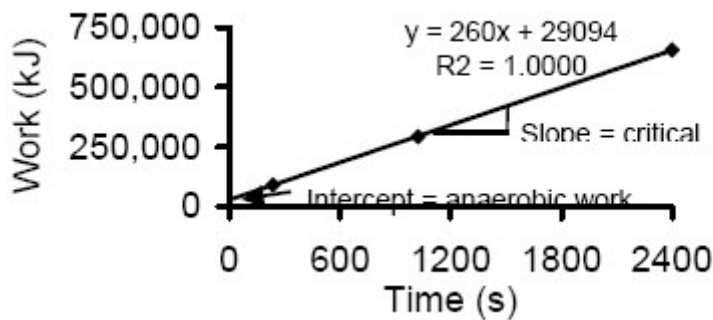
I am all about continuing education and lifelong learning. I think it's in my genes. When my grandfather was in his mid 70's he decided to take up Spanish. Why? We have no idea. But his motto was, "A person is just like a piece of machinery – if you don't move, you rust." This would explain why he continued downhill snow skiing into his 80's and ultimately lived to be 93.

So last weekend I spent two days in a USA Cycling training class entitled "Training and Racing with Power Meters\*" in an attempt to learn more about working smarter and harder on the bike. While it's not exactly one of my usual creative educational endeavors such as bongo lessons or learning to make sprouted bean burgers (yes, I've done both), it was still something I wanted to learn. But I should have braced the left side of my brain.

I was one of three women in a class of 20 people and as introductions and expectations were shared, one woman piped up and said, "OK, can you please make this topic understandable to women? I mean, I'm not that much of an expert with formulas and stuff so I want things to be explained really simplistically." I wish I would have had a picture of the expression on my face when she said this. I wanted to lean across the table and yell, "Don't lump ME into YOUR feebleminded and highly inaccurate definition of women AND THANKS A LOT FOR PUSHING THE WOMEN'S MOVEMENT BACK ABOUT 120 YEARS!!!" But I have to admit, a small part of me was meekly saying, "Yeah, what she said. Please, please, please...no math".

The class was taught by one of the gurus of using power meters – Hunter Allen. I was excited to learn from the master because quite frankly, I read his book and I think I developed new wrinkles on my face from frowning and scrunching my forehead in an attempt to comprehend some of the concepts. I understood why when he showed the second slide in his presentation – it was the formula for power soon followed by a chart (see images below – and if you can't see them, imagine a really, ugly formula and x/y axis chart).

$$p_t = p_0 + k_a \sum_{s=0}^{t-1} e^{-(t-s)\tau_a} w_s - k_f \sum_{s=0}^{t-1} e^{-(t-s)\tau_f} w_s$$



Two words crossed my brain with crystal clarity – “Holy Crap”. I told myself to strap in and hold on because this was going to be a brain stretching weekend. Awesome!! During the first break I used my cell phone to locate every Starbucks within a five mile radius (there were eight) because I was going to need it! OK Hunter...bring it on!

And bring it he did. We learned some amazing things including all the various ways power meter devices actually measure power, importance of functional threshold power, how to calculate power profiling, calculation of training stress scores, how to quantify the neuromuscular demands of training and racing (aka: quadrant analysis), and so on. There were formulas, charts, graphs, tables...everything a data whore would want! Everyone was busily scribbling notes and flipping through the handouts in an attempt to grasp the concepts being discussed.

And then I got the giggles.

While I was trying to hurry up and scribble down notes before the next Powerpoint slide was shown, I heard Hunter say the word, “asymptote” (pronounced ass-m-tote).

For some reason this struck me funny. REALLY funny. I haven’t heard THAT word since 10<sup>th</sup> grade geometry (I knew I should have paid more attention to Mrs.Grubner but most 16 year olds have other things on their minds). Asymptote? Wow. Between my fits of giggles, I actually couldn’t believe people used the stuff that was taught in high school.

To oversimplify, an asymptote is the relationship of a curved line to a straight line and the two lines never intersect but come close. But in my mind, every time I heard the word asymptote, I only heard the word “ass-n-tote” or “ass-in-tote”, which would conjure up images of me toting my ass around on my bike. Juvenile I know but it still cracked me up. Maybe this was my creative right side brain trying to insert itself. Luckily for me, we soon moved on to another chart and discussion topic.

If you want me to giggle, just say asymptote. But for Pete’s sake don’t ask me to recite the formula for calculating power. Instead, I’ll just jump on my bike and show you!

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\*A power meter is a device that is put on the bike (for example, in the rear hub or crank) and it measures the amount of power, in watts, the rider is generating. This is useful for,

say, if you want to train to outsprint pro-cyclist Robbie McEwan in a final meters of a Tour de France stage. My friend Fred calls his power meter his “suck-o-meter” because it tells him how much he’s sucking during a particular ride. For most serious athletes, a power meter is a very useful training device because it provides a very accurate way to measure their true effort (versus miles per hour or heart rate). But information doesn’t come cheap. Most power meters range from \$800-\$4000.

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