Dear Calculus Student,

I’m in love. I’ve found the perfect, absolutely beautiful, astoundingly amazing woman who is destined to be my soul mate. She makes my heart flutter and my knees knock; I see her and my stomach does somersaults. When I’m in a room with her, I feel like I could conquer the world just so I could lay it at her feet. E is for excellent, V is for vivacious, and E is for . . . um, exceedingly excellent!

And the best part of it all is: she loves me, too! At least, I’m pretty sure she does. The way she stares at me when we’re together, her eyes are like lasers! There’s something she wants, and I think it’s me.

Do you remember how I told you about selling my grandfather’s rubber-making machine? Well, since then, good old Granddad has been working on a new project: finding a way to store our raw materials in a safe, secure, underground tank. And who do you think would have a tank to sell us but Eve L. Vellen, the same effervescent Eve of the rubber-making machine fame? For the past month and a half, I’ve been sitting at Granddad’s side, across the table from my beloved, with love in my heart and stars in my eyes. She and my grandpappy have been negotiating the transfer of deeds. I’ve never thought storage tanks could be so sexy.

That’s why I’m so excited about my next project, and why I’m hoping you can help me design my dipstick. Gramps is going to make me the new Manager of the Deep (Storage, Handling, Transportation)! I’m going to have full and sole responsibility for determining the amount of materials we will have stored in our tank. Me! With a promotion like that, I’m sure to impress a savvy woman like Eve.

Why do I need to design a dipstick, you ask? Because the one-and-only object of my desire lost the original dipstick due to a freak lightning storm. Gramps asked her for the engineering blueprints on how to design a new dipstick, but Eve told him that unfortunately it seems that those blueprints were destroyed in an earthquake. Grandpa got pretty hot under the collar when she said that; he went on and on about how we haven’t had earthquakes in this region in recorded history, and so Eve apologized and said she meant, “a tornado”. But Gramps is still cranky about all this, even though I think anyone could make a slip of the tongue like that. I
mean, one natural disaster is a lot like another natural disaster, right?

But Grandfather will not listen to reason; he’s unaccountably biased against Eve, and so to make up for all that, I’ve agreed to design a dipstick that measures how much raw material we have stored in the tank.

Now, the tank is basically a giant hole in the ground, lined with concrete, shallower at the edges and deeper in the middle, with a giant metal gratiing on top. The top of the tank—I’ve measured it, so I’m sure of this—is a giant horizontal circle 200 feet across. And in the very middle—I measured this, too, with a giant pole, before we started filling it up—is 100 feet deep. So I think that this means that the storage tank is shaped like a giant hemispherical bowl. That matches exactly with what my beloved Eve tells us, and of course I believe her.

I should tell you, however, that one of her assistants came to one of our negotiations and said something about the “parabolic tank.” And Gramps (just because Eve turned to this assistant and said, “Shut your mouth, you moron!”) thinks that she’s trying to cover up something, and that our tank is actually a parabolic tank instead of a spherical tank. And the more I try to tell good old Granddad that a swell woman like Eve wouldn’t lie to us, the more he rolls his eyes and pats me on the head and says, “you’ve got it bad, boy!”.

So now my job is to design the markings on a dipstick that tell us how much stuff we’ve stored in the tank. The dipstick itself is already made: it’s just the long pole that we lower into the very middle of the tank. When we pull it back out, the stick is wet on part of it, so we can read how deep the raw material is in the tank. But we don’t want to know how deep the material is, we need to know how much of the material is there.

For example, over the last week we pumped in between 15,000 and 16,000 cubic feet of raw material; that filled the tank to a depth of about 10 feet. So the height on the dipstick was about 10 feet, but we really just want to mark “15,000” (or thereabouts) on the stick.

Figuring out that 10 (ish) feet of height is the same as 15 or 16 thousand (ish) cubic feet was easy, because we only had one truck pumping material in, and none taking it out. But soon we’re going to have lots of trucks coming and going from the storage tank, and monitoring all of them will be impossible. So, I’d love to have your help designing the markings on the dipstick, so we can use it to figure out how much stuff we have stored. And of course, if you could help me convince Grandpap that Eve is on the up-and-up, that would help, too.

I know that someday soon, I’m going to work up the nerve to actually speak to her. And then, oh then, the birds are going to sing and the sun will shine, and my beloved Eve will be mine, all mine!

Sincerely,

W. Avering
William Avering
Flip-flop Manager
Blezz Shoes