

7 Flamingo Way  
Sunnydale, CA 90666  
March 14, 2002

Math 104 Students  
Wheaton College  
Norton, MA 02766

Dear Calculus Students:

I had a falling out with my good friend Willow a while back – she was addicted to certain types of behavior and was out of control. She has since been working really hard to get her life back in order, and to recognize that and as a gesture of good-will, I'd like to give her some sort of really special present.

Willow is really, really smart, and really good at math and computer stuff (which I am not, so much), so I'd like to give her something that reflects the mathematical order of the world. One of her favorite topics from Calculus was surfaces of revolution, so I thought maybe I could give her something that is a surface of revolution. Of course, I could just go into a store and buy a plain-old vase, or heck, a bottle of beer or wine, but I wanted something more interesting: first of all, a more interesting shape, and second of all, the knowledge that it was created just for her, and what curves were used to create it, and how it was created.

I asked your enterprising and resourceful professor for help. She said she'd have your class send me several proposals that I could choose from. I would love it if each group in your class would submit a proposal consisting of a shape (and what curves you used to make that shape), how it would look when turned in to a surface of revolution, what kind of material you recommend making it out of, and how much of the material I'll need (cost isn't really an issue, so don't worry about that.)

I'm more interested in how it looks (interesting and different – could be pretty, but doesn't have to be) than in what exactly it is – it could be a vase, a candlestick holder, a decorative bottle, a wine or a champagne glass – or something else that I haven't thought of yet. Of course, if it's not obvious from its appearance, you should tell me in your proposal what it is!

Yours sincerely,  
Tara