

October 9, 2003

Math 104 Students  
Wheaton College  
Norton, MA 02766

Dear Calculus Students:

I'm writing to ask you to design something for me. See, there's this boy Jimmy that I pretend not to like, but, well ... I do. I've been pretty nasty to him, but when all of the grown-ups in town were kidnapped by aliens, he helped us kids save them, and now I'd like to thank him by giving him something special. He's even smarter than I am, and he's really into physics and math. I've heard Jimmy mention that he thinks solids of revolution are cool, so I was thinking if I could give him one of those, that'd be a cool gift.

Of course, I could just go into a store and buy a vase or even a bottle of soda, but I want something more interesting – a cool shape created just for him. Knowing the curves that were used to create it will make it more fun for him, I think. Unfortunately, I haven't gotten around to learning Calculus yet, so I don't think I can create such a thing on my own.

I'm quite good at sculpture, so as long as I have the design (with all the appropriate measurements), I'm sure I can make it. I asked your enterprising and resourceful professor for help designing a really fantastic shape. She said she'd have your class send me several proposals that I could choose from.

I don't care so much what the shape your creation is, or whether it's abstract or representational. What I care about is that it is a surface of revolution, and that the shape is cool and complex. It could be a (more interesting than usual) vase or container, a glass or bowl, an abstract piece of statuary, or a fountain, or something else I haven't thought of. Let your creativity flow (but if it's not obvious from its appearance, you should tell me in your proposal what it is!)

I would love it if each group would submit a proposal. I'll need an idea of what the solid will look like, what curves you used to create it and what they look like before being revolved. Please also suggest a material to make it out of, and tell me how much of it I'll need. I should probably know the dimensions of the final object too. I've worked with all sorts of different materials, so just pick whichever one seems right to you! Let me know by 11/5/03.

Yours sincerely,  
Cindy Vortex