# Project: Unicorn Cake

MATH A104

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Scenario: You have been asked to bake the birthday cake of a little girl who is about to turn three. This little girl has been begging for weeks for a unicorn cake, and you decide to indulge her. When looking up suggestions online on how to bake this cake, you found that most everyone suggests baking the cake in smaller circular cake pans that have a diameter of 6 inches. That’s the best way to get the height for the unicorn head. A normal circular cake pan (and the only kind you have) has a diameter of 9 inches. You need to buy cake pans. As an experienced baker, you know that the recipe you are planning on using usually fills two regular (9-inch) cake pans, with a little room to spare. How many 6-inch pans do you need to buy? (We’re going to assume all cake pans are the same height.)

Assignment: Instead of a traditional assignment where the questions guide you from step to step, this project has you practice your math solving skills from start to finish. I want to see you answer the question without any leading prompts from me. I expect this to take you about a page or maybe less.

I will be grading you on the following:

1. Structure of answer. Is your thought process clear? Are the steps laid out in a logical manner? If you used any formulas, did you write them down and label them? Don’t just race to the answer; set this up as if you are explaining it to someone else.
2. The math. I want to see some calculations justifying your answer.
3. Some kind of written justification or explanation as to how you solved the problem. (Yes, I want words!)
4. A clearly stated (and correct) answer.

Prompt: How many 6-inch cake pans will you need to use to bake a unicorn cake, assuming you’re sticking with the original recipe?

Follow up question: I wrote “assume all cake pans are the same height.” Why is this important and how does it impact your solution?