Math 300H
Written Assignment 3.14...
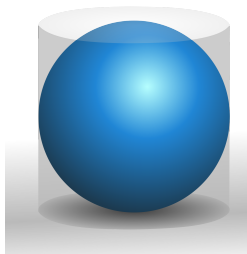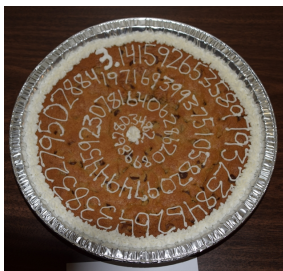
18 October 2022
Instructor: F. Sottile

I'd like you to do some exploring about the most important and famous mathematical constant. (No, not 0, but π.) Find some videos, read some web pages, and explore other resoures on the web. Start with researching a few different topics, and then narrow this down to exploring one a bit more in depth. I want you to write two or three paragraphs (one page with 2.5 cm margins and 12 point type) about some aspect of or some topic concerning the constant π.

To get started, look at the Wikipedia page. Here are some questions that you might look at/choose to address: There is vast literature on π, so there are many more.)

- What is the constant π?
- How many digits does π have?
- Does π have other natural definitions?
     E.g. geometric, or from some other (non-numeric) realm?
- Who was Archimedes?
- What is the Buffon needle?
- Is the number π rational? Algebraic? Normal? (What do these mean?)
- Can you find/understand a proof of any parts of the previous question?
- What does π have to do with the most famous equation in mathematics?
- What is special about the hexadecimal digits of π?
- When is π day? Where and when was the first π day celebrated?

You are not limited to these topics and you should not address all of these questions (at most one in any depth), they are only to help you get started. Your writing will be judged on writing criteria: structure of the paragraphs, coherence, clarity, relevance to π and to mathematics, etc. Let me reiterate, only address a couple of aspects of π, and write well about what you choose to do. Finally, please send Frank a note on Piazza with links to your best sources after Wikipedia.

Due: Thursday, November 3, 2022

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