

1 For Yourself

Make sure that you understand exactly how every step of the proof of the Banach-Tarski Paradox works. Please write the whole proof up for yourself.

2 For Our Next Meeting

Please write and practice your 10 minute talk. The format that we had talked about was,

- Statement of the Banach-Tarski Paradox
- Introduction of rigid motions, rotations of the sphere. Composition, inverses, (group structure).
- Introduction of the free group on two generators of rotations of the sphere. (draw pictures)
- Show that the free group on two generators is paradoxical.
- Explanation of how to take paradoxicality of the group and get paradoxicality of the sphere (orbits) IF TIME.

But feel free to explore and pursue your own ideas of how the talk should go! Remember that there isn't enough time to prove anything. You just need to tell a good story.