

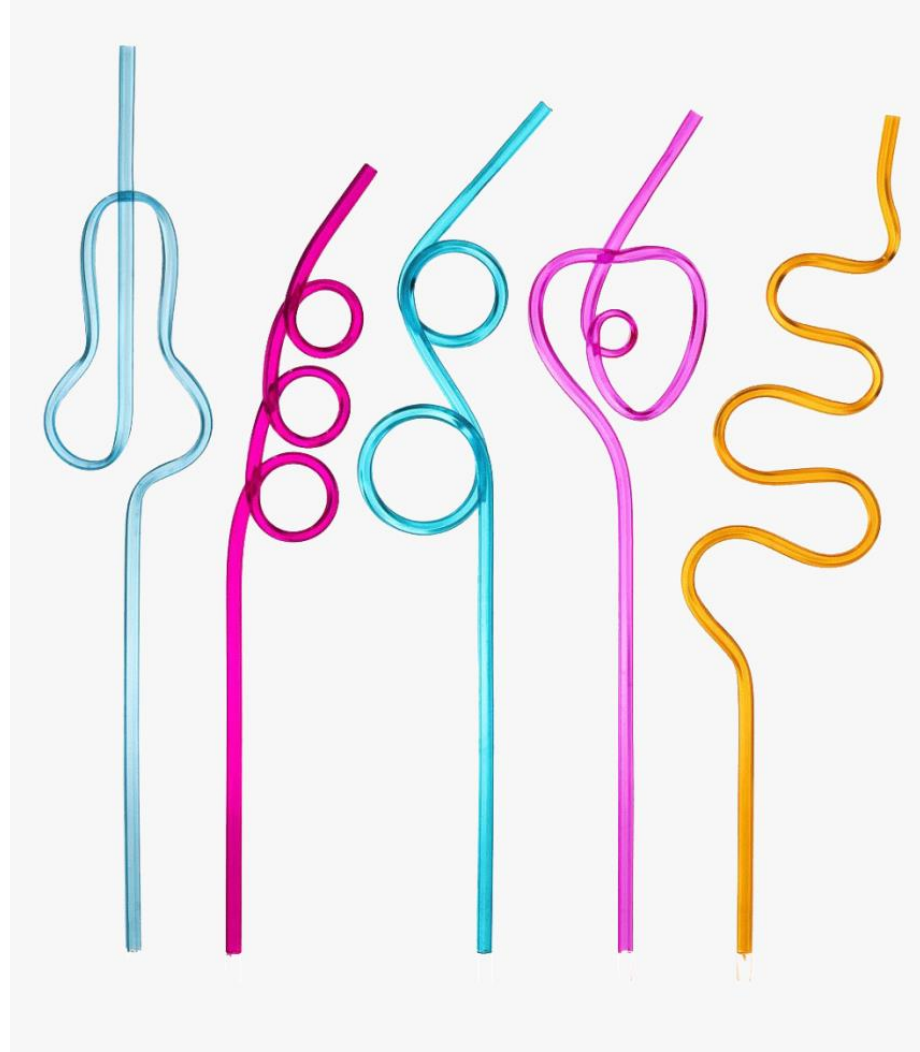
별대 구멍의 개수는 몇 개?

유재훈

Department of Mathematics
Sungkyunkwan University

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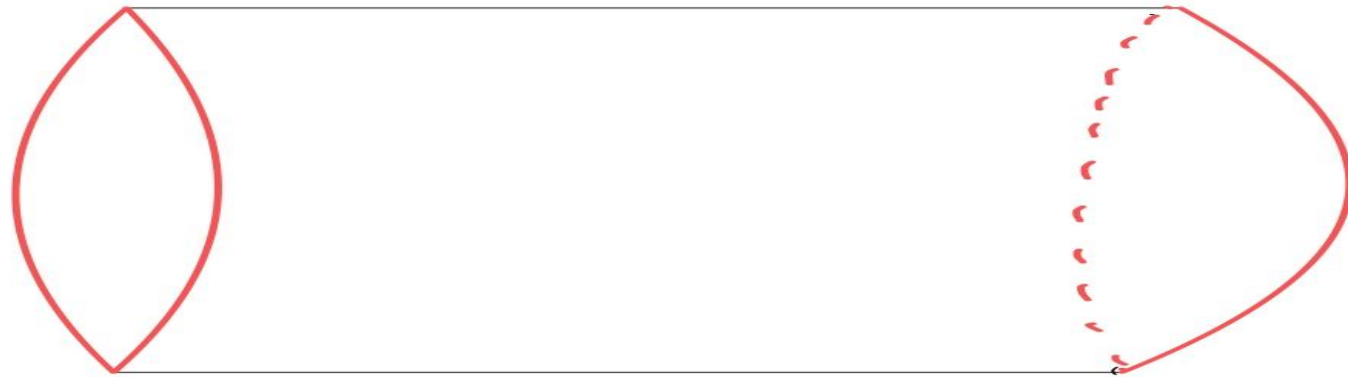
논란의 중심



1개



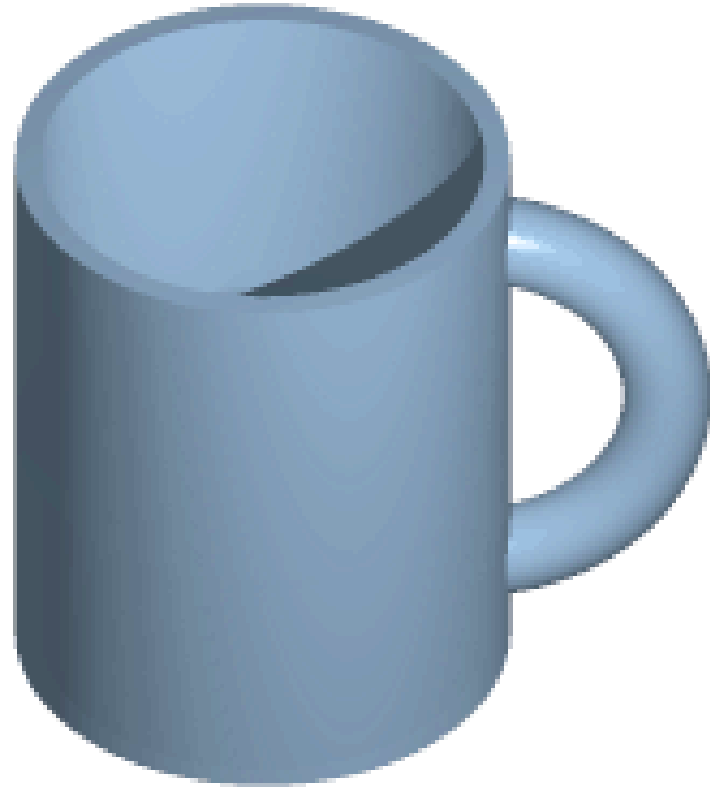
2개



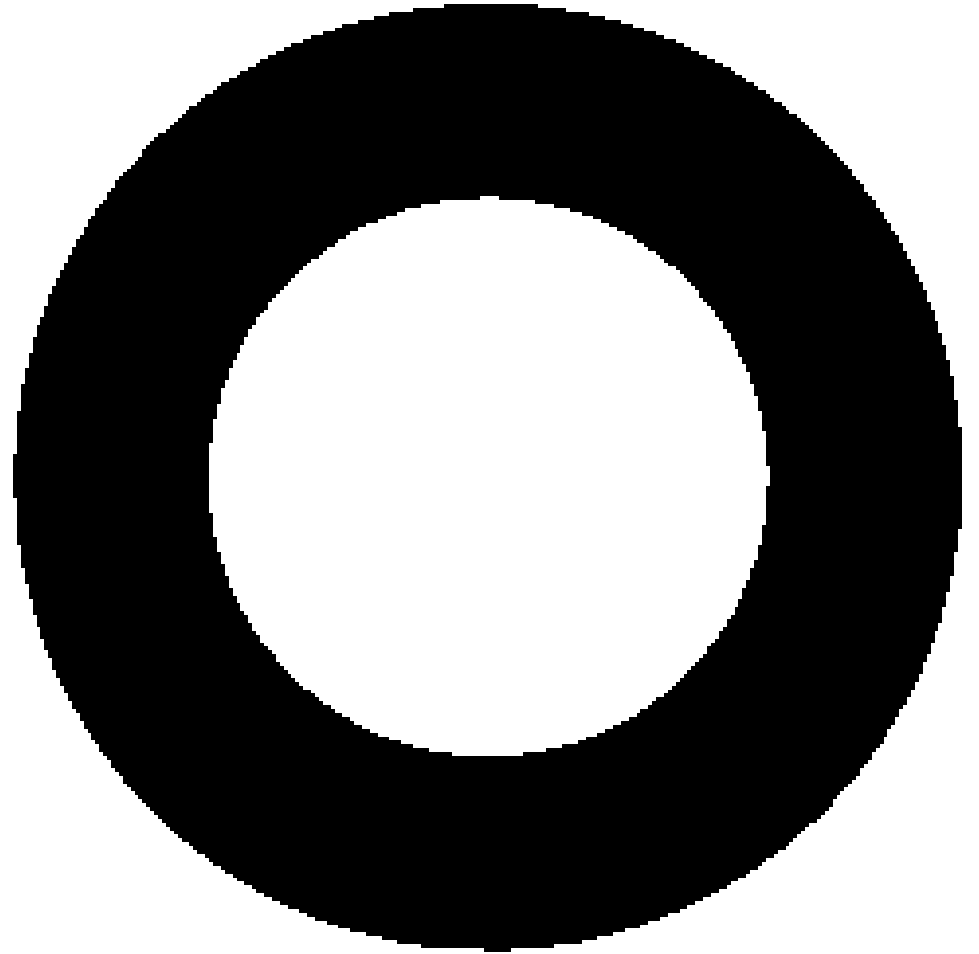
위상적으로 같다

- 연속적인 변형으로 바뀌면 같다.
- 끊거나 붙이면 안 된다.
- 단, 끊었다면 다시 그대로 붙이는 것 까지는 가능

우리가 익히 들어본 예시

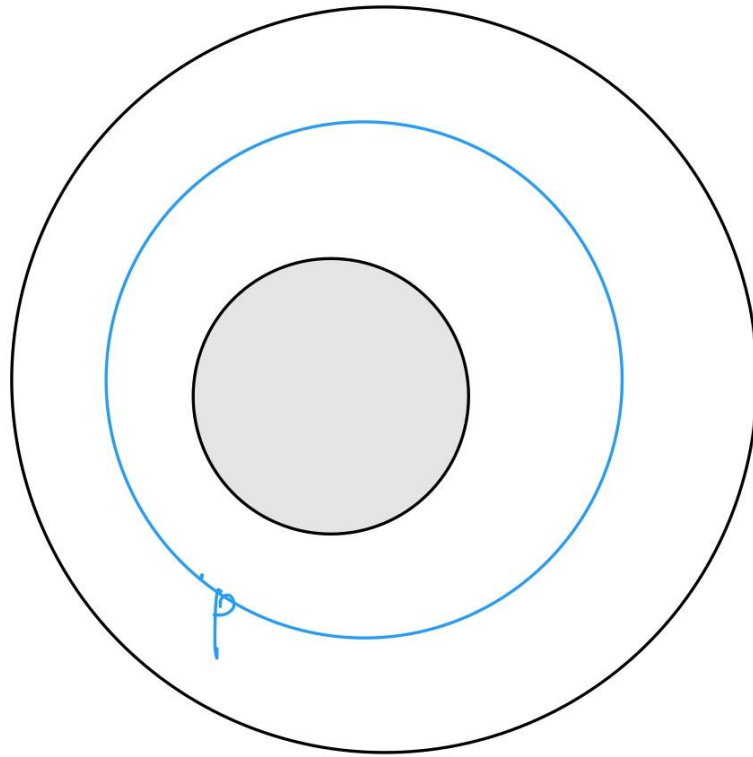


1개파의 주장

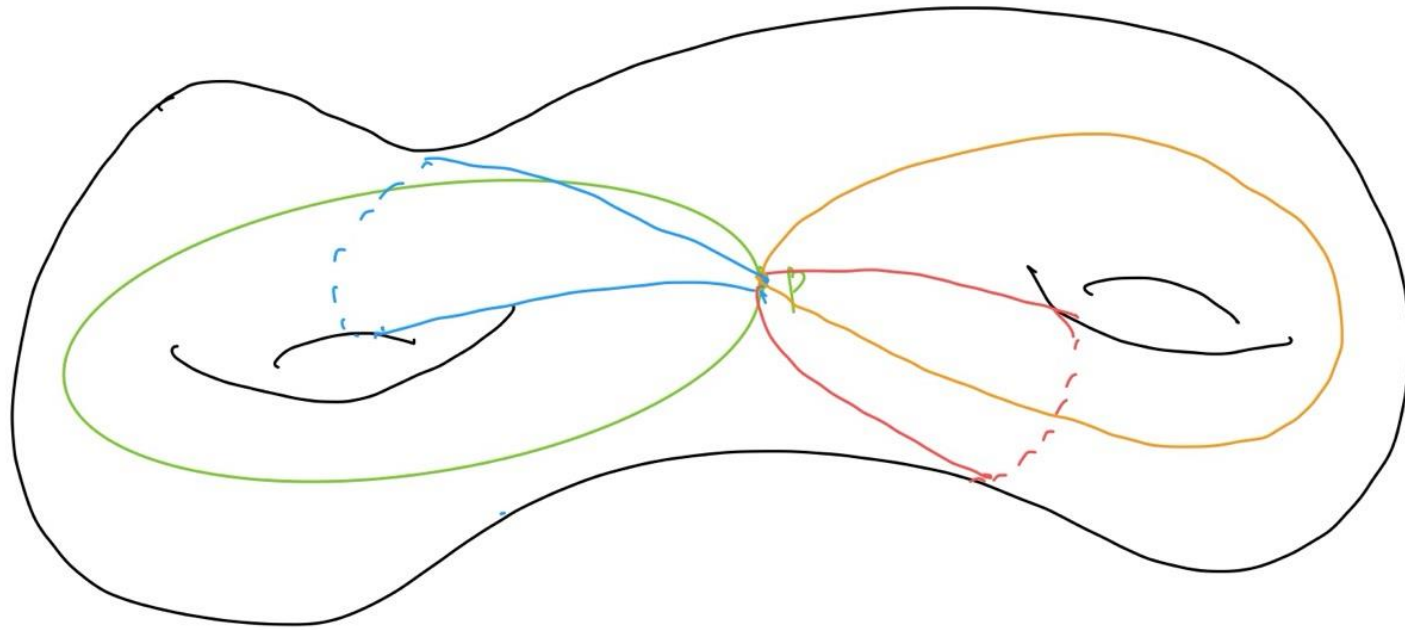


구멍 1개?

- 구멍이 한 개라면 줄을 걸어서 빠져 나오지 못하는 줄이 한 개!

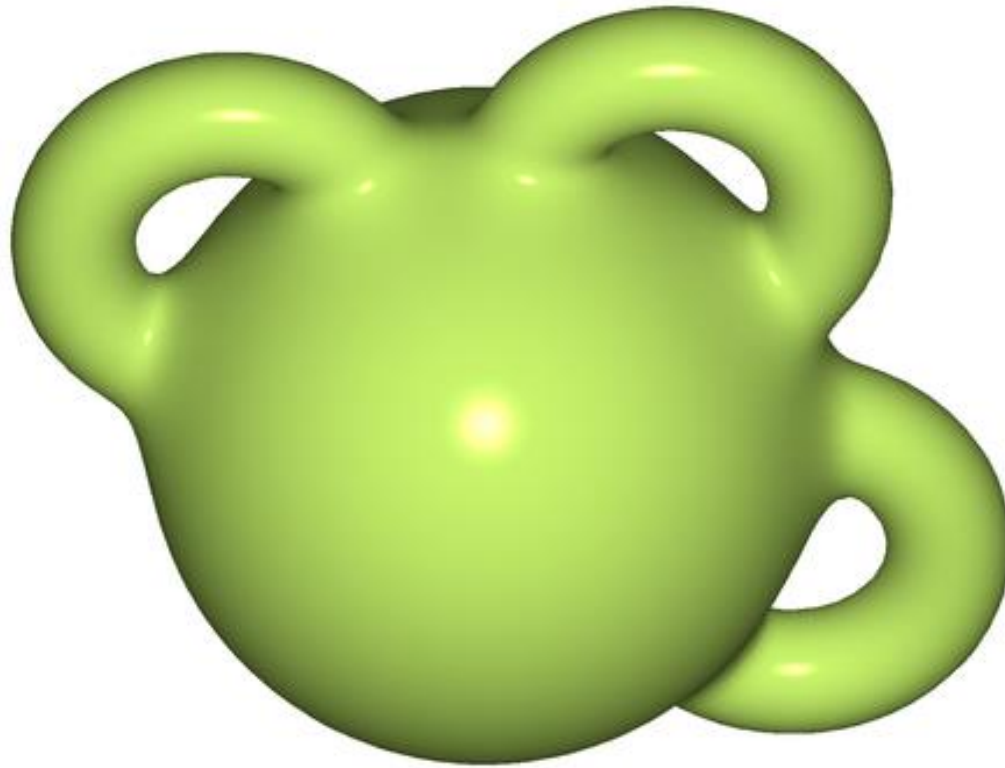


정말 그럴까?

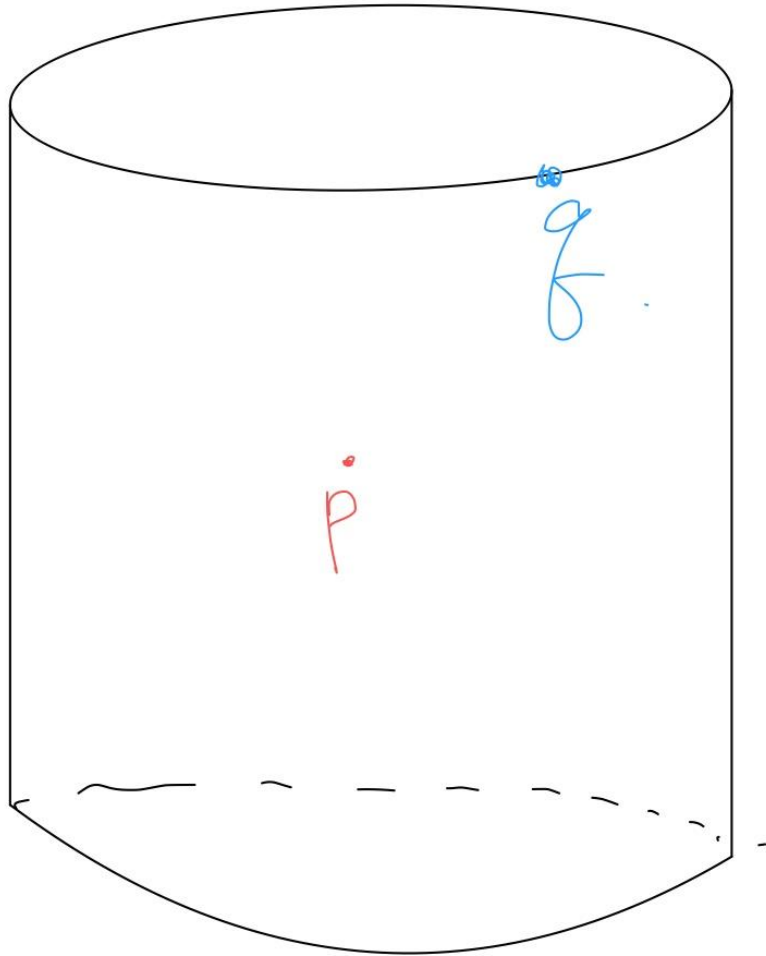


Genus의 개수

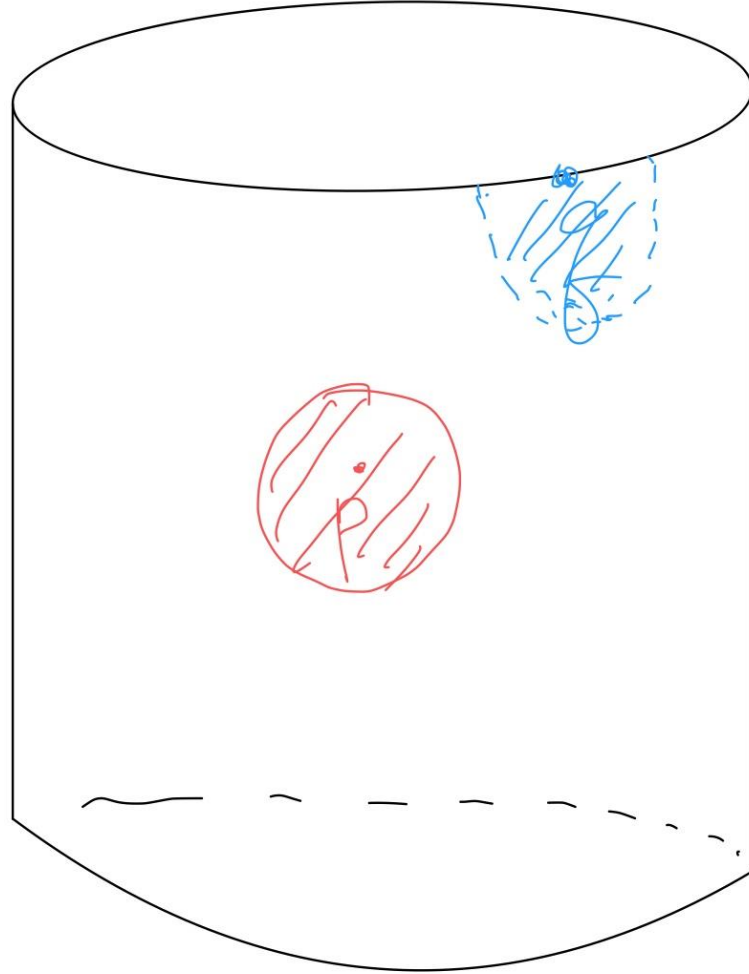
2차원에서 구 S^2 에 붙힌 손잡이의 개수



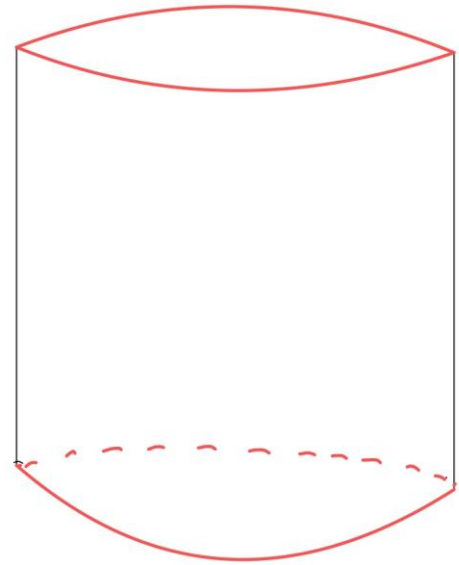
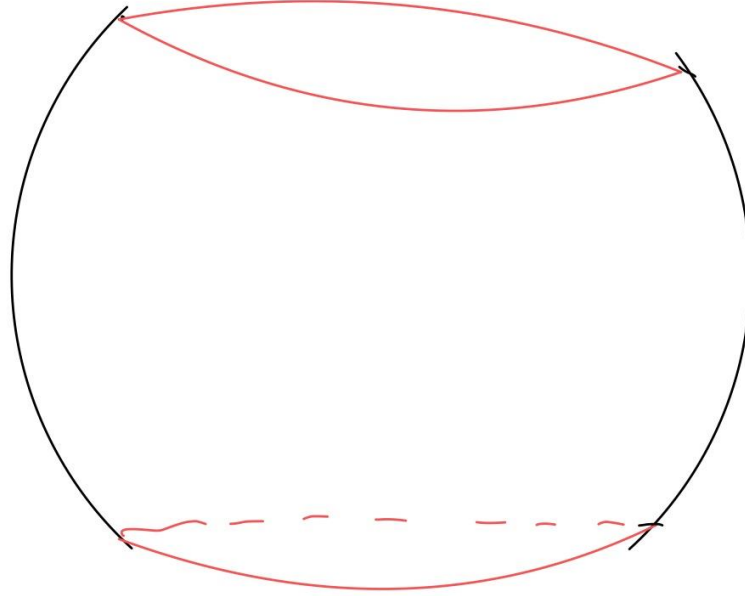
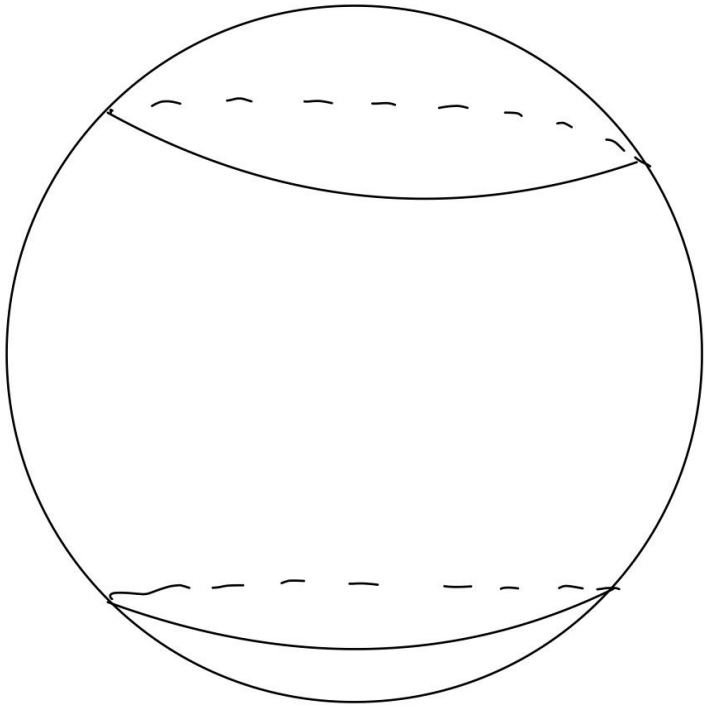
2개파의 의견



경계

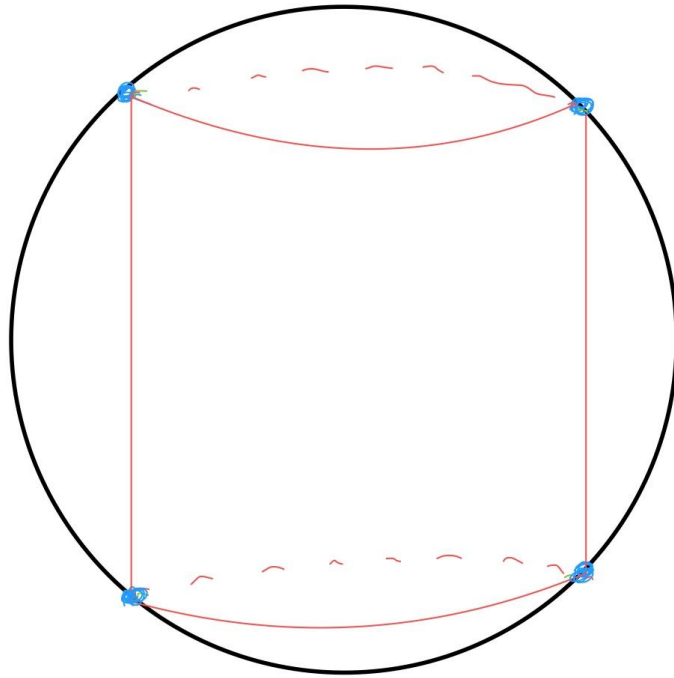


구에서 만들면?



0개파

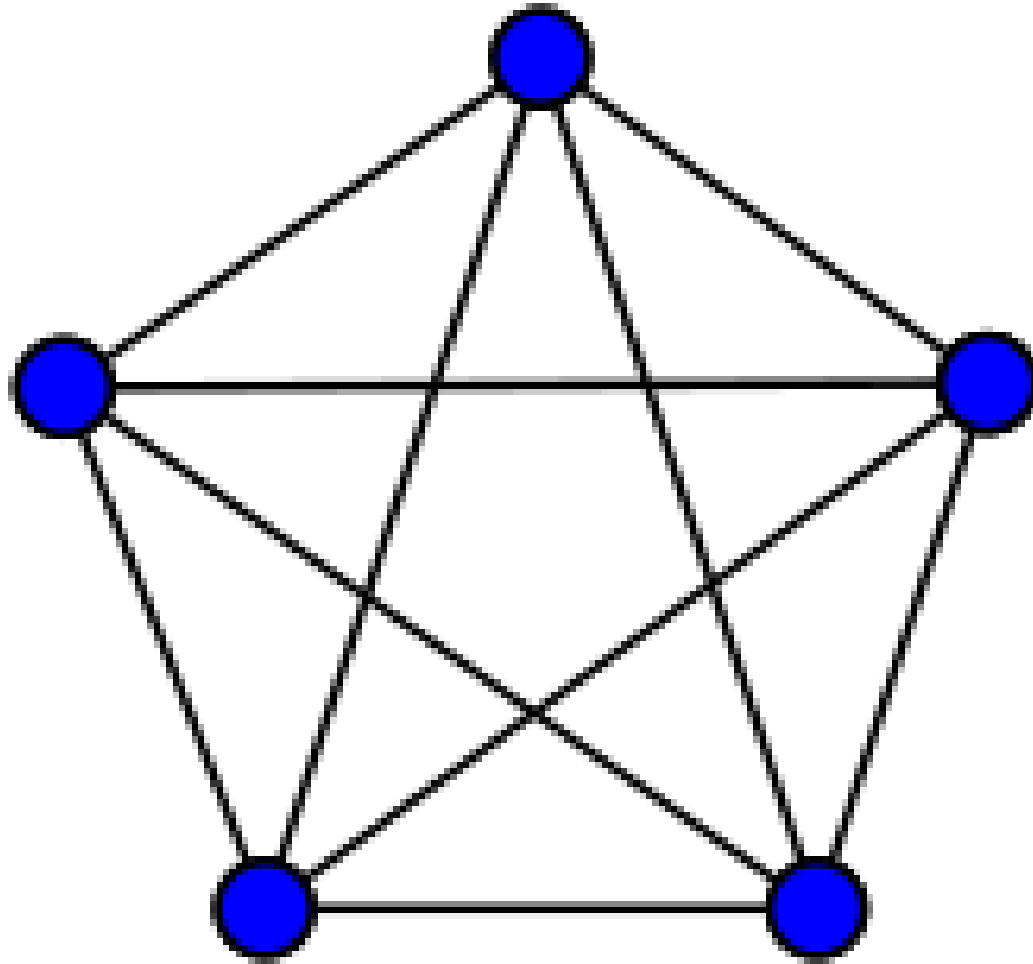
Graph Theory를 이용해보자!



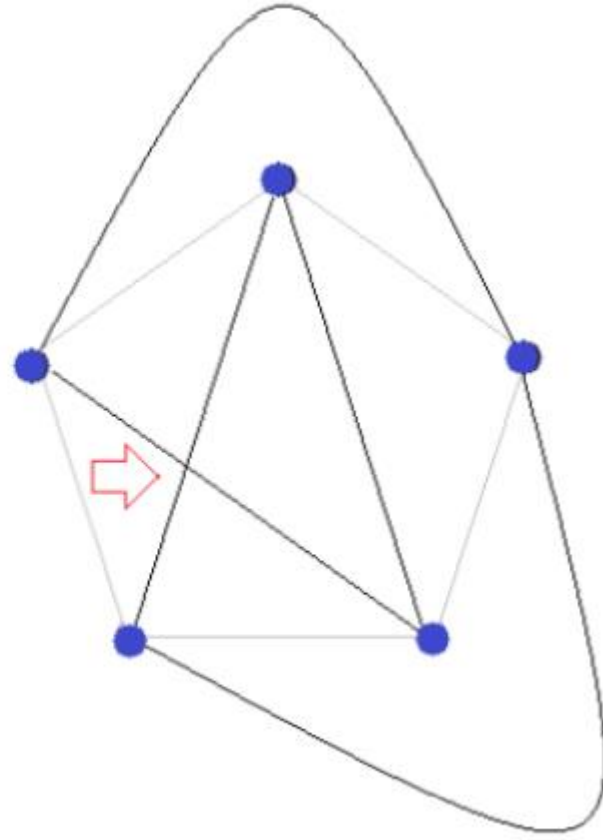
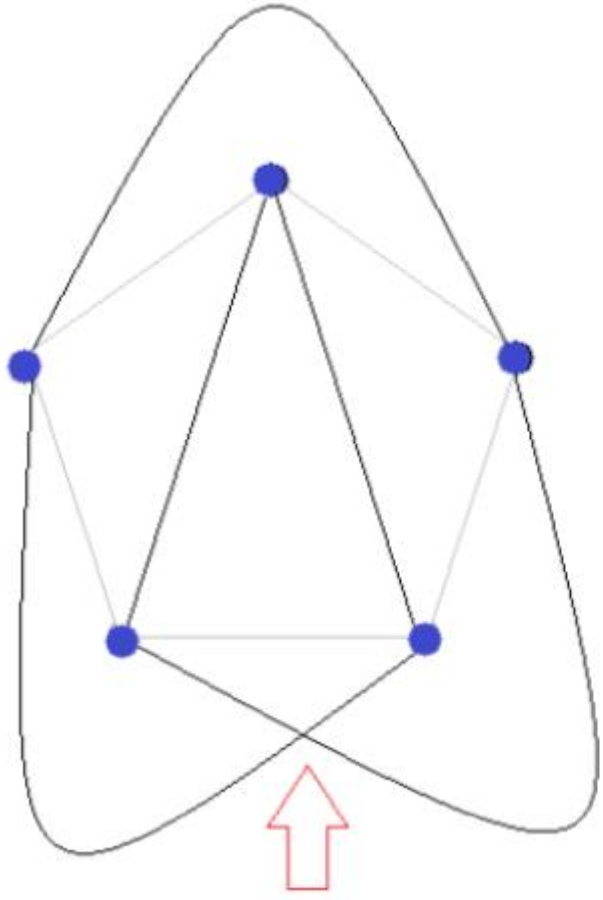
Graph의 Genus

Graph를 그릴 수 있는 최소 genus를 2차원 곡면의 genus

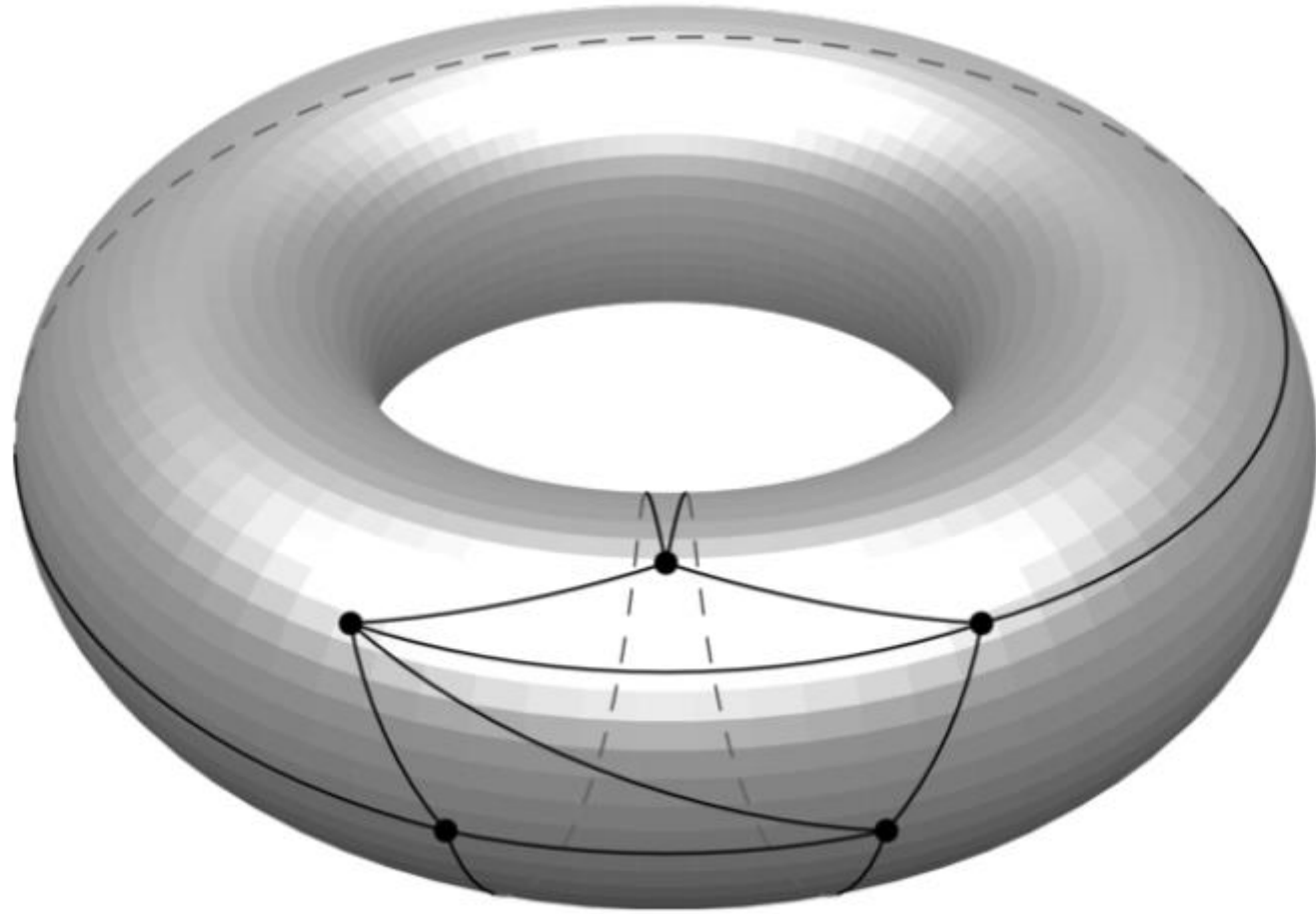
Graph의 Genus



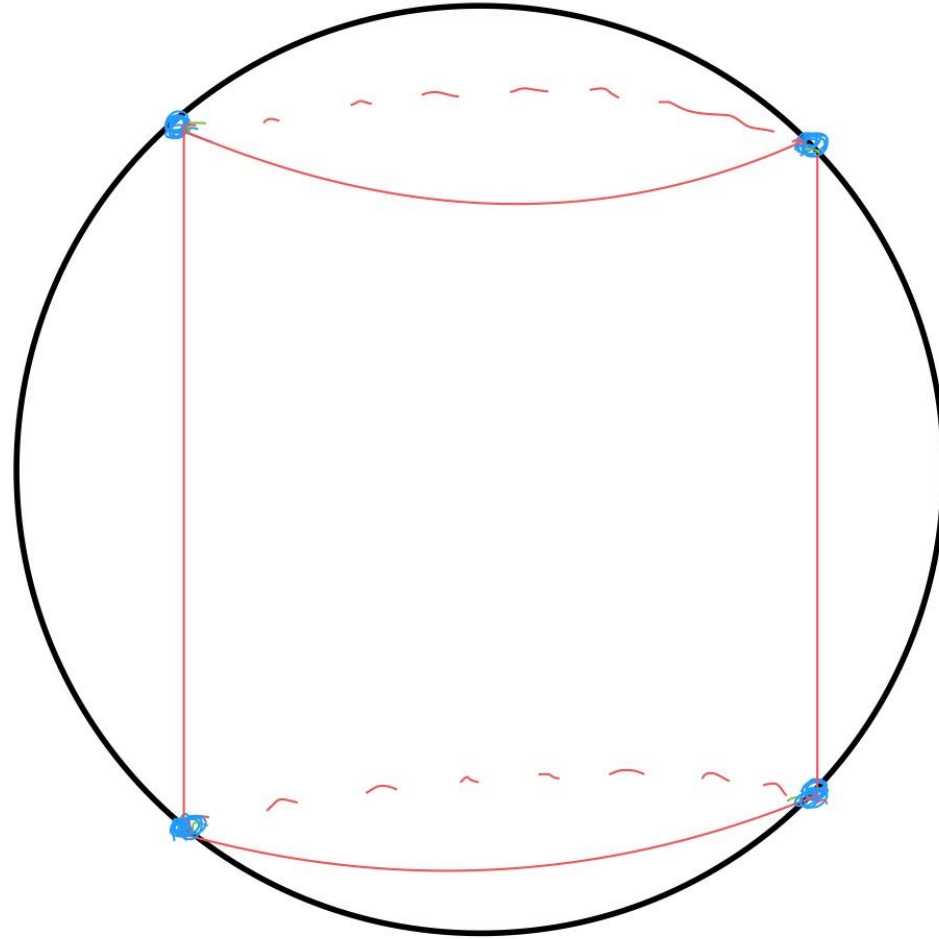
K5는 평면 그래프x



K5는 Torus에



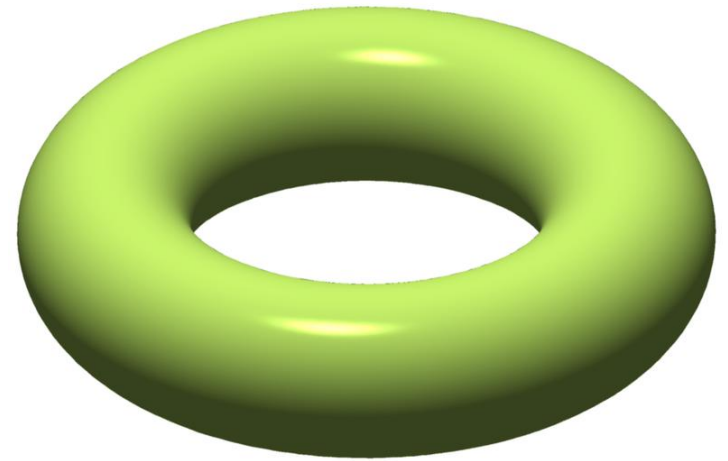
0개파의 주장



왜 이런 일이?

언어의 세계와 논리의 세계가 다르기 때문

언어의 세계는 중의성과 모호성을 가지고 있다.



Thank you for listening