

# Platonism

## Mathematical Objects

- **Existence.**  
There are mathematical objects.
- **Abstractness.**  
Mathematical objects are abstract.
- **Independence.**  
Mathematical objects are ontologically independent of intelligent agents and their language, thought, and practices.



# Semantic Considerations

Gottlob Frege (1953)

- The language of mathematics purports to refer to and quantify over abstract mathematical objects.
- Many mathematical theorems are true.
- A sentence cannot be true unless its sub-expressions succeed in doing what they purport to do.
- So there exist abstract mathematical objects that these expressions refer to and quantify over

