

Reading Guide #1  
Plato, "Selections on Mathematics"

From *Timaeus*

1. Differentiate between things that are, and things that are just becoming.
2. How does Plato argue that the world is created? What can we infer about the origins of the world?
3. "As being is becoming, so is truth to belief" (*Timaeus*, 29c). Explain.

From *Phaedo*

4. According to Plato, why do objects have the properties they have? How does this claim apply to mathematics?
5. What kinds of things participate in opposite forms? What kinds of things do not participate in opposite forms? Why not?
6. How are oddness and odd numbers similar? How are they different?
7. "So it is not only the opposite forms that cannot face one another's approach; there are other things too which cannot face the approach of opposites" (*Phaedo*, 104d). Explain. What does Plato's argument show about the relation between mathematical objects and the forms?

From *Theaetetus*

8. What does our ability to compare experiences of the same object using different senses this show?
9. How does Plato argue that knowledge is not perception?

From *Republic, Book VI*

10. Explain the analogy between the sun and the good. Describe the two worlds over which they are sovereign.
11. How does Plato divide the visible realm? Describe the two parts.
12. How does Plato divide the intelligible realm according to the methods used to investigate the two parts?
13. What are the different elements of the two parts of the intelligible realm?
14. What names does Plato apply to our methods of investigating each part of the intelligible realm?

From *Republic, Book VII*

15. Describe the analogy of the cave. Why does seeing real objects require habituation?
16. How does thinking about numbers, "Lead to the apprehension of truth" (525b)?
17. According to Plato, how is studying mathematics useful?
18. How is the language of geometers, "Ludicrous" (527a)?

From *Meno*

19. How does Socrates demonstrate that learning is recollection?
20. Did Meno's slave know how to double a square, before his conversation with Socrates? Explain.