

UNIVERSITY OF LONDON
ARTS FACULTY

MA PHILOSOPHY NEW REGULATIONS
for Internal Students

PHILOSOPHY OF MATHEMATICS

Answer THREE questions.

1. Does spatial intuition have a legitimate role in geometry?
2. Are the objects of geometry physical, abstract, both, or neither?
3. Does the fact that there are incompatible geometrical theories (Euclidean and non-Euclidean) entail that some geometry is false?
4. 'Numbers are nothing but names' (Berkeley). Is this a tenable view?
5. Is our knowledge that $2+2 = 4$ empirical, analytic, or synthetic a priori?
6. Is the statement that Jupiter has 7 moons a statement about a concept?
7. Are classes logical objects?
8. Can the view that mathematics is logic be vindicated by means of simple type theory?
9. 'A mathematical proposition becomes true by being proved.' Discuss.
10. Can a mathematical claim be proved by refuting its negation?
11. Outline and explain the significance of Hilbert's Programme.
12. Should we doubt that some mathematical entities are infinite?
13. 'Mathematical claims about abstract numbers and sets are useful

fictions, but need not be believed.' Discuss.

14. 'Mathematics is a science of structures.' If so, what kind of entity is a structure?

END OF PAPER