

MA 330 HOMEWORK
DUE MONDAY, JAN 14

This problem set may be handwritten.

Problem 1: Prove that $\sqrt{3}$ is irrational.

Problem 2: Extending the comments on page 17 of JTG, during Step 1 of the quadrature of the rectangle, sketch a proof (using compass and straightedge only) that one can bisect a given line segment.¹

Problem 3: Provide an explanation for why squaring a geometric object is called “quadrature.”

¹If you are stuck, look at Proposition I.10 of Euclid’s Elements (for an online version there is a link on the course website.