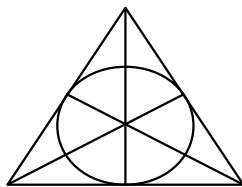


**Mathematics 3260H – Geometry II: Projective and non-Euclidean geometry**  
TRENT UNIVERSITY, Fall 2017

**Assignment #10**  
**Fano-tastic coordinates**  
*Due on Wednesday, 29 November.*

Recall that the Fano configuration is the smallest projective plane, consisting of seven points and seven lines, with each point incident with three lines and each line incident with three points.



1. Introduce coordinates in the Fano configuration and show – in detail! – that the resulting ternary ring is just  $\mathbb{Z}_2 = \{0, 1\}$  (where  $+$  and  $\cdot$  are done modulo 2). [10]

HINT: Brute force ...