

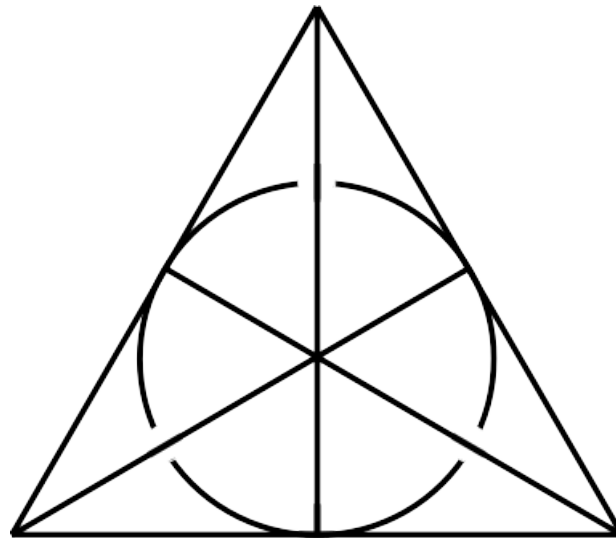
Mathematics 3260H – Geometry II: Projective and Non-Euclidean Geometry  
TRENT UNIVERSITY, Fall 2021

Assignment #7  
Central Collineations Meet the Fano Plane

*Due on Friday, 5 November.*

*May be submitted on paper or via Blackboard.\**

Recall from class that the smallest example of a projective plane is the Fano configuration, also called the Fano plane, which has seven points and seven lines, with three points on each line and each point having three lines pass through it.



*(Anyone agree that the Deathly Hallows in the Harry Potter world are incomplete? :-)*

1. How many central collineations does the Fano plane have? [7]
2. Does the Fano plane have any collineations that are not central? If so, given an example; if not, explain why. [3]

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\* All else failing, please email your solutions to the instructor at: [sbilaniuk@trentu.ca](mailto:sbilaniuk@trentu.ca)