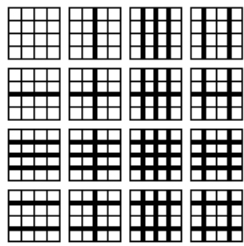
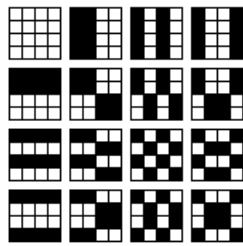


S. H. Cullinane

Picturing the smallest projective 3-space. April 26, 1986.

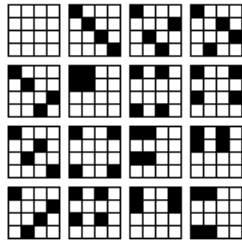


The 15 points

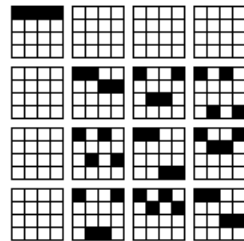


The 15 hyperplanes

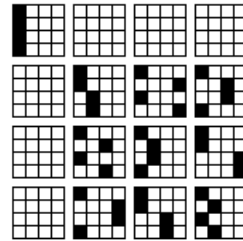
The 2 figures at left show a symplectic polarity  $a$ ; each point lies in its corresponding hyperplane. The 15 lines fixed under  $a$  are shown in fig. A below.



A

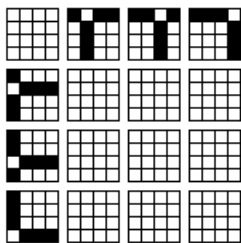


B

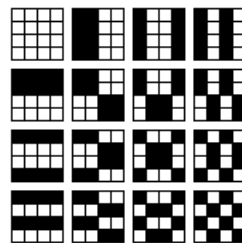


C

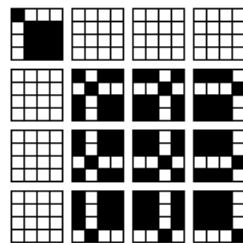
----- The 35 lines -----



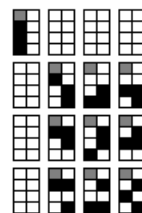
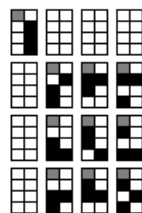
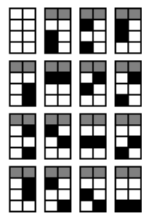
The 6 spreads in A



Sums of the 4-subsets of A pictured in A



Sums of the 4-subsets of A pictured in B or C



The R. T. Curtis correspondence between the 35 lines and the 2-subsets and 3-subsets of a 6-set. This underlies  $M_{24}$ .