

Grassmannians over rings and subpolygons

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We investigate special points on the Grassmannian which correspond to friezes with coefficients in the case of rank two. Using representations of arithmetic matroids we obtain a theorem on subpolygons of specializations of the coordinate ring. As a special case we recover the characterization of subpolygons in classic frieze patterns. Moreover, we observe that specializing clusters of the coordinate ring of the Grassmannian to units yields representations that may be interpreted as arrangements of hyperplanes with notable properties. In particular, we get an interpretation of certain Weyl groups and groupoids as generalized frieze patterns.