SOME TAUTOLOGICAL BUNDLES OVER THE BRUHAT–TITS TREE

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The nodes $V(\mathcal{T})$ of the Bruhat–Tits tree $\mathcal{T}$ represent similarity (or homothety) classes of $\mathfrak{o}$ lattices in a two dimensional $\mathfrak{k}$ vectorspace. These lattices, in turn, are specified by a choice of basis.

$$GL_2(\mathfrak{k})$$

$$\downarrow$$

$$GL_2(\mathfrak{k})/GL_2(\mathfrak{o})$$

$y = gen$

$Aut(\mathfrak{o}u + \mathfrak{o}v) = GL_2(\mathfrak{o})$

$\mathfrak{k}$ bases of V	$(u,v) \in V \times V$
$\downarrow$	$\downarrow$
$\mathfrak{o}$ lattices in V	$\mathfrak{o}u + \mathfrak{o}v =: [u,v]$
$\downarrow$	$\downarrow$
nodes in $\mathcal{T}$	$\mathfrak{k}^{\times}[u,v] =: \langle u,v \rangle$