

# Advanced Linear Algebra MAT 315

Oleg Viro

02/27/2020, Lecture 4

# Quotients of Vector Spaces



# Affine subsets

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The set of elements of a partition of  $X$  is called the **quotient set** of  $X$  by the partition.

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 $(v + U) + (w + U) = (v + w) + U$ ,  $\lambda(v + U) = (\lambda v) + U$  for  $v, w \in V$ ,  $\lambda \in \mathbb{F}$ .

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Verify!