Linear Algebra Standards How can we solve systems of linear equations?	
□ □ E2 .	Row reduction. I can put a matrix in reduced row echelon form.
□ □ E3.	Systems of linear equations. I can write the solution set (in proper notation) for a system of linear equations.
What is	a vector space?
□ □ V 1.	Vector space I.
$\square \square \mathbf{V2}.$	Vector space II.
□ □ V 3.	Linear combinations . I can determine if a vector can be written as a linear combination of a given set of vectors.
\square \square V4.	Spanning sets. I can determine if a set of vectors spans a vector space.
\square \square V5.	Subspaces. I can determine if a subset of a vector space is a subspace or not.
What st	ructure do vector spaces have?
$\square \square \mathbf{S1}.$	Linear independence. I can determine if a set of vectors is linearly dependent or independent.
$\square \square \mathbf{S2.}$	Basis verification. I can determine if a set of vectors is a basis of a vector space.
\square \square S3.	Basis construction. I can compute a basis for the subspace spanned by a given set of vectors.
□ □ S4.	Basis of solution space. I can find a basis for the solution set of a homogeneous system of equations.
	Dimension . I can compute the dimension of a vector space.
□ □ S6.	Abstract vector spaces . I can answer questions (such as V3,S1,S2, and S3) about vector spaces of polynomials or matrices.
How can	we understand linear maps algebraically?
	Linear maps as matrices. I can write the standard matrix corresponding to a linear transformation between Euclidean spaces, and given the matrix compute the image of a given vector. Linear map verification. I can determine if a map between vector spaces of polynomials is
$\Box \Box A 2$	linear or not. Injectivity and surjectivity. I can determine if a given linear map is injective and/or surjective.
	Kernel and Image. I can compute the kernel and image of a linear map, including finding bases.
	gebraic structure do matrices have?
	Matrix Multiplication. I can multiply matrices.
	Invertible Matrices. I can determine if a square matrix is invertible or not.
	Matrix inverses. I can compute the inverse matrix of an invertible matrix.
	we understand linear maps geometrically?
	Row operations. I can represent a row operation as matrix multiplication, and determine how
	it changes the determinant.
	Determinants. I can compute the determinant of a square matrix.
	Eigenvalues. I can find the eigenvalues of a 2×2 matrix. Eigenvectors. I can find a basis of the eigenspace of a square matrix associated to a given
U4.	Elementary. I can find a basis of the electropace of a square matrix associated to a given

eigenvalue.