Linear Algebra

GENERAL VECTOR SPACES CHAPTER 05

Vector Space Axioms :-
V - a set whos elements are called vectors.
F - a set of number called scalars.

Two Operations defined on V.
1. Vector Addition.
2. Scalar Multiplication.
u, v and w are vector in V.
k and c are Real numbers.

AXIOMS:- Vector Addition Axioms

1. $u+v \in V$ Closure Under Addition.
2. $u+v = v+u$ Commutative.
3. $u+(v+w)=(u+v)+w$ Associative.
4. V has an additive identitey 0
   Such that for every v in V
   $v+0 = v$ (Additive identitey)
5. For every v in V there is an additive inverse $-v$ such that
   $v+(-v)=0$