

Source:

1 | **Definitions**

1.1 | **TODO group**

A set and binary operation that satisfies Group Properties

- Closed
- Identity
- Inverse
- Associative

1.2 | **TODO field**

A set and two binary operations: the primary (addition) and secondary (multiplication) that "mostly" satisfies group properties for both operations. It must be a group under the primary operation and a group under the secondary operation except without a secondary inverse for the primary identity.

1.3 | **TODO non-singular matrices**

2 | **Connections**

2.1 | **TODO connect direct sum and linear independence**

2.2 | **TODO matrices to represent complex numbers**

3 | **Computation**

3.1 | **TODO Find the determinant of matrices**

3.2 | **TODO Find equations of lines and planes using cross product and dot product**

4 | **Derivations**

4.1 | **TODO properties of the determinant**

4.2 | **TODO inverse of a 2x2 matrix**