

- Vector :

1. directional cosines
2. inner product(work,projection)
3. outer product(area vector,moment)
4. unit vecor
5. maginitude, length
6. point description
7. projection theorem
8. triple product
9. line description
10. plane description

- Vector space:

1. linear combinations
2. subspace
3. basis
4. dimension
5. linearly dependent
6. linearly independent
7. Gram-Schimidt process
8. orthogonal
9. row vector, column vector
10. functional space

- Tensor :

1. rank 0 — scalar(length, enegy, work)
2. rank 1 — vector(position,displacement, velocity, acceleration)
3. rank 2 — moment of inertia, stress and strain
4. transformation law