

List of definitions and other theory-based questions

- a. Homogeneous function – definition
- b. Euler's theorem statement
- c. Beta and gamma – definitions and properties
- d. Rank of matrix – definition
- e. Cayley Hamilton theorem – statement
- f. Quadratic form – definition and matrix notation
- g. Nature, rank, index, and signature of a quadratic form
- h. Principal component analysis – definition and use
- i. Vector space with example
- j. Subspace with example
- k. Linear combination with example
- l. Linear span with example
- m. Linear independent vectors with example
- n. Linear dependent vectors with example
- o. Basis and dimension
- p. Linear transformation
- q. Rank-nullity theorem statement
- r. Image or range space definition
- s. Kernel of a linear transformation
- t. Rank of a LT
- u. Nullity of a LT
- v. Inner product
- w. Norm
- x. Inner product space
- y. Orthogonal sets
- z. Orthonormal sets