

Ioan Şerb

Rectangular modulus, Birkhoff orthogonality and characterizations of inner product spaces

Comment.Math.Univ.Carolinae 40,1 (1999) 107-119.

Abstract: Some characterizations of inner product spaces in terms of Birkhoff orthogonality are given. In this connection we define the rectangular modulus μ_X of the normed space X . The values of the rectangular modulus at some noteworthy points are well-known constants of X . Characterizations (involving μ_X) of inner product spaces of dimension ≥ 2 , respectively ≥ 3 , are given and the behaviour of μ_X is studied.

Keywords: characterizations of inner product spaces, orthogonality, moduli of Banach spaces

AMS Subject Classification: 46C15, 46B20