1 The QR-Factorization

The Gram-Schmidt orthonormalization process leads to an important factorization of matrices called the ***QR*-factorization**. If A is an $m \times n$ matrix of rank n, then A can be expressed as the product $A = QR$ of an $m \times n$ matrix Q and an $n \times n$ matrix R, where Q has orthonormal columns and R is upper triangular.