= 0 , an equation of degree two . Thus , C is a two @-@ dimensional R @-@ vector space (and , as any field , one @-@ dimensional as a vector space over itself , C) . If ? is not algebraic , the dimension of Q (?) over Q is infinite . For instance , for ? =
? there is no such equation , in other words ? is transcendental .

= = Linear maps and matrices = =

The relation of two vector spaces can be expressed by linear map or linear transformation . They are functions that reflect the vector space structure ? i.e. , they preserve sums and scalar multiplication :