Contents

0.1 The pseudo-inverse

The definition of the inverse is that:

$MM^{-1} = I$

$M^{-1}M = I$

We also have:

$MM^{-1}M = M$

$M^{-1}MM^{-1} = M^{-1}$

0.1.1 The inverse of a homomorphism

Generally we don't have inverses of homomorphisms as the number of dimensions are different.

We can, however, find a matrix M^+ which satisfies:

$MM^+M = M$

$M^+MM^+ = M^+$

This is the pseudo-inverse.