

Inversion of 2x2 Matrices

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Notes on the inversion of 2x2 matrices, which can be applied to an arbitrary number of $n \cdot n$ matrices.

1 The inversion of a matrix

Just like every number has a reciprocal such as 8^{-1} , a matrix n also has a reciprocal: n^{-1} . When a matrix is multiplied by its reciprocal ($n \cdot n^{-1}$) the result is I , also known as the identity matrix. The identity matrix is the matrix equivalent of the number 1 obtained from the reciprocal of a real number, in other words, the identity matrix is just 1, exactly the same way that the reciprocal of $\frac{1}{8} \cdot 8 = 1$.