

Norm of a matrix.R

35139

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```
## the first norm of a matrix -- induced norm
A = matrix(data = rnorm(9,0,1),3,3)

print("p = 1      ,maximum absolute column sum")

## [1] "p = 1 induce norm ,maximum absolute column sum"
print(norm(A,type = "1"))

## [1] 4.300957
print("p = 2 induce norm, the largest singular value (svd) of x.")

## [1] "p = 2      , the largest singular value (svd) of x."
print(norm(A,type = "2"))

## [1] 3.315573
print("p = +infinity inducement, maximum absolute row sum")

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print(norm(A,type = "i"))

## [1] 4.702616
## the second norm,the matrix is seen as a vector
print(" Frobenius norm, the Euclidean norm of x treated as if it were a vector")

## [1] " Frobenius norm, the Euclidean norm of x treated as if it were a vector"
print(norm(A,type = "f"))

## [1] 3.714454
print(" Maximum Modulus of all the elements")

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print(norm(A,type = "M"))

## [1] 2.324122
```