# matrix norm

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|---|---|
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| Related topic | MatrixPnorm |

A   is a norm on the set $M_{m \times n}(R)$ of $m \times n$ matrices over a ring $R$, and is usually denoted by $|| \cdot ||$.

The Frobenius matrix norm $||\cdot||_F$ and the `http://planetmath.org/MatrixPNorm`matrix $p$-norm $|| \cdot ||_p$ are the most frequently used matrix norms.

A vector norm is a matrix norm for which the ring $R$ is a field.