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0.1 L_p norms (p-norms)

0.1.1 L^P norm

This generalises the Euclidian norm.

$||x||_p = (\sum_{i=1}^{n} |x|_i^p)^{1/p}$

This can defined for different values of p. Note that the absolute value of each element in the vector is used.

Note also that:

$||x||_2$

Is the Euclidian norm.

0.1.2 Taxicab norm

This is the L^1 norm. That is:

$||x||_1 = \sum_{i=1}^{n} |x|_i$

0.1.3 Angles

0.1.4 Cauchy-Schwarz