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conjugate index

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Entry type	Definition
Classification	msc 46E30
Synonym	conjugate indices
Synonym	conjugate indexes
Synonym	conjugate exponent
Synonym	Holder exponent
Synonym	Hölder exponent
Related topic	HolderInequality
Related topic	BeattysTheorem
Related topic	BoundedLinearFunctionalsOnLpmu

For  $p, q \in \mathbb{R}$ ,  $1 < p, q < \infty$  we say  $p$  and  $q$  are conjugate if  $\frac{1}{p} + \frac{1}{q} = 1$ . Formally, we will also define  $q = \infty$  as conjugate to  $p = 1$  and vice versa.

Conjugate indices are used in the <http://planetmath.org/HolderInequality> Hölder inequality and more generally to define conjugate spaces.