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orthogonal

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The word orthogonal comes from the Greek *orthē* and *gonia*, or “right angle.” It was originally used as synonym of perpendicular. This is where the use of “orthogonal” in orthogonal lines, orthogonal circles, and other geometric terms come from.

In the realm of linear algebra, two vectors are orthogonal when their dot product is zero, which gave rise a generalization of two vectors on some inner product space (not necessarily dot product) being orthogonal when their inner product is zero.

There are also particular definitions on the following entries:

- orthogonal matrices
- orthogonal polynomials
- orthogonal vectors

In a more broad sense, it can be said that two objects are orthogonal if they do not “coincide” in some way.