Proof of the general non-existence of moredimensional spaces

On this sides are shown in a easy form, why a consideration which describes more of 3 spacedimensions are not necessary. At first I want the discussion concentrate on the 2-dimensional "space" respectively on the area or plane. Please see the picture 1.



Picture 1: Determination of a point P through 2 coordinates in the plane

A point is in the plane through 2 known sizes respectively dimensions (x=4 and y=2) determined.

The position of the axis is for everybody standardized.

But there is the possibility, by the reasons of the explaining, to install two additional axis respectively dimensions – in the plane.

Please see the picture 2.



Picture 2: Two additional dimensions (u and v) in the plane

The axis u and v are exemplary vertical, but this is not necessary. At last it is through the picture 2 obviously, if the sizes x and y are known, than the two additional sizes respectively dimensions u and v will be at the beginning determined and are not able to vary in the reference to point P. That means in the plane there are 2 dimensions are completely enough, a consideration about more than 4 dimensions or more than 3 dimensions, in the plane or area, are not necessary.

Now, the next step goes to the 3-dimensional space. For the explanation a picture again, the picture 3.



Picture 3: Determination of a point P through 3 coordinates in the 3-dimensional space



Picture 4: An additional dimension (w) in the 3-dimensional space

Similar, as in the 2-dimensional plane a point P through 2 known sizes are determined, in the 3-dimensional space is a point P through 3 known sizes determined.

Now, because of the explanation there is a additional dimension w setting in the 3dimensional space. This dimension respectively size is at the beginning determined if the other 3 dimensions respectively sizes are known. Please see the picture 4.

The axis w is between the axis x,y,z. Through the 3-dimensional representation in the 2-dimensional area respectively on a sheet of paper there is the representation distort, the z-axis is normally invisible, but for the showing it is to set the w-axis exactly through the point P, or similar, as the 2-dimensional consideration there is the possibility to set the w-axis only between the x-axis and y-axis.

At least is should be clearly, of a point P are described through 3 dimensions in the space there is not necessary to set a fourth or fifth or even a higher dimension, then all additional dimensions are in any case fixed automatically. Moreover there are necessary to know the position of the additional axis / dimensions each other and throughout it is more difficulty as a description with the limit of 3 dimensions.



Summary it is to make clearly, that a spacerepresentation respectively spacedescription with 3 dimensions are enough. From a centre respectively zeropoint it is possible, through the 3 known dimensions, to describe all directions (shown in picture 5).

Picture 5: Through the 3 spacedimensions all directions could be described