

The fourth dimension, or, visualizing a hypercube

[Business](#)



Einstein stated that there are four dimensions three spatial dimensions and one temporal dimension.

He did not say there were not five dimensions or even a million. I am writing a report about spatial dimensions not temporal dimensions. There may be such thing as temporal dimensions. If so, then there could be more than a million dimensions that are in this dimension such as movement and the favorite, time. In this speech I am talking about spatial dimensions, not temporal dimensions (temporal means time).

You notice that a line has two points; a square has four points and a cube eight. Thus you would think a hyper-cube, or tesseract, would have sixteen points. A hyper cube or tesseract, for which are names for a cube stretched out into the fourth dimension, if you were to see a tesseract model in the third dimension you would see a cube inside a cube with the corners connected but that model would be a model of the shadow of a hyper-cube. Now we can't ever draw a four dimensional object with all its directions because we can only draw two dimensions of three dimensional objects. Don't think that " Hey I can draw a really good cat," because you are drawing a cat from the third dimension but you are drawing a second dimensional image. If you could draw a third dimensional canvas from the fourth dimension you would be able to draw everything, so if you were drawing on a four dimensional canvas and you were of the fourth dimension then you could draw a picture of the third dimension and draw everything including somebody's kidney (sort of sounds like an x-ray but way more complicated).

There is an infinite amount of dimensions, and when you are in a dimension, you can see the entire dimension that comes before it. In the fourth dimension, cubes can be used as faces. If a man could draw all of a three-dimensional object without using dotted lines, he would be in the fourth dimension using a three dimensional canvas. We must become of the fourth dimension to understand all of what it is. Here in the third dimension, you only see in two dimensions.

If you could see three dimensions, you would be from the fourth dimension. Now, I know what you're thinking: You say you see height width and depth. Well think about this: when you are in the funhouse in the mirror maze, you can't tell the difference between what's real and what's just a reflection. What we see in our world is portrayed by our eyes to our mind the same as what we see in a picture. We are really only seeing two dimensions of the objects we're looking at.

Since we see two dimensions, a two-dimensional object would see one dimension, and a one-dimensional object wouldn't see any dimensions. Thus a hyper-sphere or hyper-cube, a four-dimensional object, would see three dimensions. Let me explain these four dimensional objects. It might make more sense if I explained it using the example of a cube. Imagine that a one dimension stretches and becomes a line.

The line stretches its side and becomes a square. The square stretches up and becomes a cube. Now here is the tricky part: to imagine that the cube stretches unknown direction and becomes a hyper-cube. Remember at the beginning I said that a hypercube would have sixteen points? Now think

<https://assignbuster.com/the-fourth-dimension-or-visualizing-a-hypercube/>

about this: a line has two points, a square has four lines and a cube has six squares. Thus, you think a hyper-cube would have eight cubes. Let's take a journey into the second dimension.

We stop to hear a conversation between two squares, "How do you do" "I am well how about you" "My father said that there is another dimension" "That so called dimension is time" "I don't think so because although we only have two examples we can use those to determine what the next dimension would be like. I think that the next dimension is a dimension of a different direction." "If that were true then we'd be faces just like a line is one of our faces" The conversation abruptly ends because the first square is confused thinking that the other square must be right that time has to be the next dimension because he can't imagine how he could possibly be a face. I might be messing up right now. Even though I think that I'm right I could really be messing up. Patterns led me to my conclusion.

Why do we think time is the fourth dimension? I think the only reason we consider time to be the fourth dimension is that we don't understand what the fourth dimension really looks like because we can't comprehend it. In order to help us understand the fourth dimension a bit more, imagine a square that is visited by a sphere, but the square would only see a line. If the square looks at the reflection of the light he would find out it was a circle. Lets say perhaps the sphere rises or descends; the square would think the circle was a sorcerer or something because according to the square's views it would look like the sphere was starting to shrink. If the sphere then told him about the third dimension when the sphere said "up" the square would think North because its plane (the dimension something lives in) has only

<https://assignbuster.com/the-fourth-dimension-or-visualizing-a-hypercube/>

north, south, east and west but no up or down which means that you and I cant figure out the fourth dimension without leaving our plane. The sphere had to appear as a circle because the squares plane could only allow two-dimensional figures.

The only way the square could learn about the third dimension is to become of the third dimension. Thus, it is the same with us. Since the square saw a circle, we would see a sphere if a hyper-sphere came down to us.

Alternatively, a cube if it was a hypercube. These could disappear quite easily. The hyper sphere, from our point of view, would gradually decrease in size until it wasn't there.

In addition, the hypercube would not get smaller, unless it was tilted according to our plane, but it would suddenly disappear, unlike the sphere. This could account for numerous ghost sightings. However, I do not believe that that is true. I have told you about the fourth dimension,