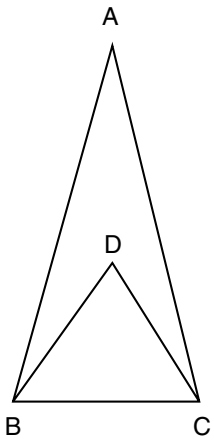
38 Furthermore, you can be helped to understand the foregoing if you ascend from a quantitative triangle to a non-quantitative triangle. Clearly, every quantitative triangle has three angles equal to two right angles. And so, the larger the one angle is, the smaller are the other two. Now, any one angle can be increased almost but (in accordance with our first premise) not completely up to the size of two right angles. Nevertheless, let us hypothesize that it is increased completely up to the size of two right angles while the triangle remains [nonetheless a triangle]. In that case, it will be obvious that the triangle has one angle which is three angles and that the three angles are one.

39 In like manner, you can see that a triangle is a line. For any two sides of a quantitative triangle are, if conjoined, as much longer than the third side as the angle which they form is smaller than two right angles. For example, because the angle BAC is much smaller than two right angles, the lines BA and AC, if conjoined, are much longer than BC. Hence, the larger the angle, e.g., BDC, the less the lines BD and DC exceed the line BC, and the smaller is the surface. Therefore, if, by hypothesis, an angle could be two right angles, the whole triangle would be resolved into a simple line.



Hence, by means of this hypothesis, which cannot hold true for quantitative things, you can be helped in ascending to non-quantitative things; that which is impossible for quantitative things, you see to be altogether necessary for non-quantitative things. Hereby it is evident that an infinite line is a maximum triangle. Q. E. D.

40 *Chapter Fifteen*: The maximum triangle is a circle and a sphere.

Next, we shall see more clearly that a triangle is a circle. Let us postulate the triangle ABC, formed by rotating the line AB—A remaining stationary—until B comes to C. There is no doubt that if line AB were infinite and B were rotated until it came all the way back to the starting point, a maximum circle would be formed, of which BC would be a portion. Now, because BC is a portion of an infinite arc, BC is a straight line.[79] And since every part of what is infinite is infinite, BC is not shorter than the whole arc of infinite circumference.