

# An Effective Refutation of General Relativity and Quantum Theories

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## Abstract

It is briefly shown that all physical theories that fall back on a mathematical application of the circle number  $\pi$  as an irrational dimensionless number are irrational and incorrect in their explanatory content, since they divide the physical dimensions of space (L) and time (T) into an incorrect and make an irrational connection.

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## The circular number $\pi$ in mathematics

In mathematics, it is common to understand the circle number  $\pi$  as an irrational number (without physical dimension) that represents an approximation of an "ideal" circle as a static object or static shape. An "ideal" circle is understood as a regular n-gon with an infinite number of corners. The irrational circular number  $\pi$  thus represents the concept of "infinity" (n-gon with  $n = \text{infinity}$ ).

$$\pi = \frac{\text{Circumference}}{\text{Diameter}} = 3.14 \dots \dots [no \text{ dimension}] \quad (1)$$

However, "infinity" must not be used as a postulate or premise in physics, since "infinitely" large or small units cannot be measured and therefore cannot be confirmed experimentally.

Likewise, in physics - according to the concept of relativity - there must be no static objects, since every object is always in relative motion to other objects in the universe and a static snapshot would again represent an "infinitely" small period of time, i.e. the concept of infinity would be introduced, which would not be experimentally accessible.

The use of the circle number  $\pi$  as an irrational dimensionless number thus represents irrational thinking and the general theory of relativity as well as the quantum theories, both of which are based on the dimensionless irrational circle number  $\pi$ , are refuted with this consideration as "irrational" constructs of thought.

## Reinterpretation of the circular number as a mathematical-physical representation of "movement"

While the static interpretation of a circle is irrational, since a static ideal circle would have an infinite number of corners, the concept of an "ideal" circle can (must) be interpreted physically as the relationship between time and space and thus as a definition of the hitherto unexplained properties of the fundamental ones spacetime.

If one understands a circle as a 1-dimensional line of length  $L^1$  (the circle radius), which is rotated once around one end, i.e. it undergoes a full rotation in a certain time, then a circle is created by performing a rotational movement. This circle then represents an area in the dimension  $L^2$  [meter<sup>2</sup>], while the "circle number" no longer represents an irrational dimensionless number, but the relationship of time to space.

$$\pi = \frac{\text{unit of time (Rotation)}}{\text{unit of length (Radius)}} = 1 \left[ \frac{\text{Second}}{\text{Meter}} \right] \quad (2)$$

This gives a fundamental definition of space and time that is rational, that reflects rational thinking and contrasts a rotational movement in units [second / meter] with a linear movement in units [meter / second].

## Summary

It has been shown that the use of a dimensionless circle number  $\pi$  is irrational, i.e. not accessible to the mind. It has been shown that the concept of "circle" must be thought of as rotational motion and must represent a physical unit ([second/meter]). In principle, the use of dimensionless constants (such as the irrational circle number  $\pi = 3.14\dots$ ) in physics must be rejected as inadmissible.

Other essays<sup>12</sup> show how a final theory in the sense of a “world formula” (TOE) can be constructed from these considerations.

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<sup>1</sup> Pohl M.U.E (2022): Search for the World Formula, Scientific God Journal Vol 13 No1,  
<https://scigod.com/index.php/sgj/article/view/781>

<sup>2</sup> Pohl M.U.E (2022): Quantentheorie und Allgemeine Relativitätstheorie aus Perspektive der „Weltformel“,  
<https://vixra.org/abs/2210.0020>