



*Middle Technical University official emblem integrated with Project ZERO concept, showing and 0 reflections.*

# Project ZERO: Solving the Division by Zero Problem

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## Project ZERO: Solving the Division by Zero Problem

- CORE DISCOVERY
  - $x \times 0 = -x$
  - $x \div 0 = -x$
  - $0/0 = 1$
  - $0^\circ = 1$
  - $\lim_{n \rightarrow 0} (0^2) \times n(0)^2 \approx$  (Projective Plane is Sphere)
- GEOMETRIC INTERPRETATION
  - The 'Hole' is 1 Unit. The 'Hole' mod zero is sphere
- SCIENTIFIC CONTEXT
  - Numerical Zero vs. Positional Zero
  - Black Holes & Dark Energy
  - Multidimensional Physics
  - Topology & Manifolds
  - Quantum Gravity
- Unlocking Infinite Horizons in Science and Technology

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## Contents / Table of Sections

1. Title Page ( )
2. Introduction ( )
3. Mathematical Laws of Project ZERO ( )
4. Scope of Application & The Absolute Zero ( ) ( )

5. The M Point: Makabashi Point ( : )
6. Mathematical & Quantum Physics Implications ( ) ( )
7. Comparative Analysis: Finite Inflation vs. Infinity ( : ) ( )
8. Future Engineering Applications ( )
9. Conclusion ( )

## The Artistic and Physical Philosophy of Colors

**Scientific Context:** The choice of these vibrant colors and the dynamic background is far from arbitrary; it is a deliberate fusion of Mathematics, Physics, and Fine Art. Historically, when division by zero was deemed "undefined" or "impossible," these colors rotated into an infinite, chaotic blur—much like Newton's Disc—merging into a blinding White Void of uncertainty. In that state, science was "blinded" by the infinity of the singularity.

**The Discovery:** With the establishment of Project ZERO, the chaotic rotation has finally stopped. By defining the mechanics of the zero-point, the "White Randomness" has been deconstructed. Now, the randomness has ceased, and the true spectrum of science has become clear. Each color now represents a distinct dimension and a stabilized energy frequency that we can finally understand and calculate. "The blur of infinity has vanished, and the clarity of science has emerged."

## Project ZERO: Redefining Singularity and the Mechanics of White Holes

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**Abstract:** This research proposes a transformative mathematical framework to resolve the "division by zero" paradox. By distinguishing between the "Positional Zero" (marker) and the "Numerical Zero" (active entity), we define zero as a Reflective Operator. This shift allows for the resolution of Einstein's Field Equations at singularity points, suggesting that Black Holes function as gateways that generate "White Holes" in parallel dimensions.

## Title: Solving the Division by Zero Problem: Unlocking Infinite Horizons in Science and Technology

**Introduction:** Division by zero has long been one of the major challenges in mathematics, often considered a forbidden operation in traditional calculations. However, developing methods to handle this problem has opened new and infinite horizons in various fields, including physics, chemistry, engineering, and medicine. This paper explores how addressing division by zero contributes to understanding additional dimensions beyond the traditional three- and four-dimensional framework, and how it has impacted modern science.

# Impact of Division by Zero on Various Sciences

## Physics

- Handling undefined values has enabled the study of complex cosmic phenomena, such as black holes, dark energy, and infinite states in quantum mechanics.
- It facilitated the visualization of additional dimensions intertwined with space and time, enhancing multi-dimensional theories.

## Chemistry

- Enabled modeling chemical reactions under infinite concentrations or extreme energy conditions.
- Assisted in understanding chemical processes in environments not replicable by traditional methods, such as stars or ultra-compressed gases.

## Engineering

- Paved the way for designing mechanical and engineering systems that handle extreme or boundary values, including AI, robotics, and aerospace engineering.
- Contributed to developing tools for simulating physical phenomena in unlimited virtual environments.

## Medicine and Life Sciences

- Allowed the modeling of complex systems, such as blood flow under unbounded pressure or neural signal processing in the brain.
- Supported the creation of mathematical models to predict rare diseases or drug interactions under extreme conditions.

## Understanding Zero

- Zero is not a single concept, but a symbol whose meaning varies according to its structural role.
- Zero as a numerical value is fundamentally different from zero as a marker of order and scale.
- Conflating value-based zero with positional zero leads to deep conceptual errors.
- Zero in itself is an active entity, not merely an empty position within a counting system.
- The zero in 10 is not a true zero; the number 10 represents a quantity in itself and contains no independent zero. Here, zero serves only as a positional marker for the decimal place. This zero in 10 or 100 is fundamentally different from the standalone 0: while 0 has no value on its own, 10 and 100 are complete numbers with definite value, not merely zero and one.



$$5 - 5 = 0$$

## ZERO: First Rule

Multiplying any number by zero equals the same number negatively.

$$5 \times 0 = -5$$

$$7 \times 0 = -7$$

Multiplying by a positional zero is different from multiplying by a standalone zero within a number: the former represents a positional gap defining the decimal place, while the standalone zero has numerical value that affects the result of multiplication.

$$300 \times 5 = 1500$$

Multiplying by the positional zero in 10 yields zero because it represents a positional gap indicating the decimal place, not a value to be multiplied; in other words, no actual multiplication occurs.

$$10 \times 5 = 50$$

## Multiplication Analogy

$$5 \times 0 = -5$$

[ 1 ]

[ 2 ]

[ 3 ]

Multiplying by zero is like taking 5 full tanks (or cups) of water and multiplying by zero: you end up with 5 empty tanks (or cups). In other words, nothing remains. Dividing by zero is like trying to split 5 full tanks among zero tanks: you also end up with 5 empty tanks — nothing.

# ZERO Powers

$$0^{\circ} = 1, \quad 0^{\circ} = 1, \quad 5 \times 0 = -5, \quad 5 \div 0 = -5$$

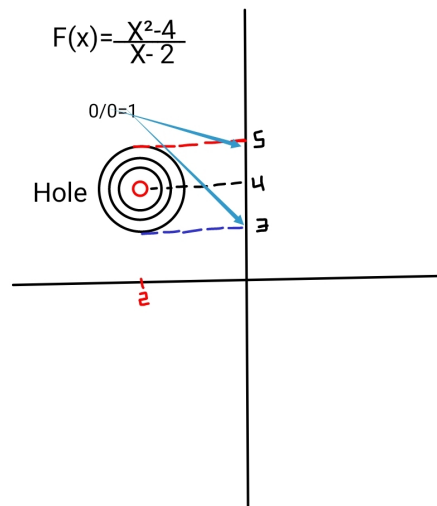
# Exploring Limits and Gaps: Geometric Shapes at Zero Points and Novel Insights

$$f(x) = \frac{(x-1)(x-3)}{(x-1)(x-3)}$$

$$f(1) = \frac{(1-1)(1-3)}{(1-1)(1-3)} = \frac{0(-2)}{0(-2)} = 1$$

$$f(3) = \frac{(3-1)(3-3)}{(3-1)(3-3)} = \frac{(2)(0)}{(2)(0)} = 1$$

$$F(x) = \frac{x^2 - 4}{x - 2}$$



1 (Hole) .

From the diagram, we observe that the range of the gap is 1 unit; that is, the center of the gap is at approximately level 4, its upper bound is near level 5, and its lower bound is near level 3.

This discovery is no longer merely a mathematical solution; it has opened boundless horizons in physics, chemistry, engineering, quantum mechanics, and dynamics. It enables the conceptual unification of spacetime forces and the exploration of multiple dimensions, granting mathematics unprecedented rigor after decades of fragility in confronting extreme phenomena. In this way, resolving division by zero transforms from a formal problem into a key for understanding the universe at the deepest levels of structure and natural law.

## Scope of Application ( )

To maintain mathematical consistency, this research distinguishes between two operational fields:

- **Standard Arithmetic Field:** In everyday calculations and positional number systems (e.g., 10, 200, 0.5), the classical rules of mathematics remain unchanged.
- **Singularity Physics Field (Project ZERO):** The proposed rule  $x \div 0 = -x$  is applied exclusively to The Absolute Zero Point. This is defined as the coordinate where the radius of a massive object reaches zero ( $r = 0$ ), such as the core of a Black Hole.

Why this distinction? Because the "Zero" at the center of a Black Hole is not a "placeholder"; it is a physical barrier where gravity becomes infinite. Project ZERO provides the mathematical bridge to cross this barrier without resulting in a "Mathematical Error."

## The M Point (The Makabashi Point)

Symbol: ( $\uparrow?$ )

**Proposal for Use:** The use of the Infinity symbol ( $\infty$ ) in engineering and physics to describe sudden inflation is fundamentally incorrect. The symbol ( $\infty$ ) implies an eternal, never-ending process, which contradicts physical reality.

Instead, The M Point ( $\uparrow?$ ) must be used. It represents a "Finite Super-Inflation"—a state where the system undergoes an unknown, massive surge that is nonetheless contained and finite.



*M POINT* .

**Conclusion:** Scientists and engineers should stop using ( $\infty$ ) for "Engineers must stop using Zero as a symbol for physical inflation; whenever a collapse occurs, the Infinity symbol ( $\infty$ ) should be used instead to maintain mathematical integrity."

## The Fundamental Axioms

The research establishes that zero is not "nothingness" but a geometric boundary governed by the following laws:

**The Reflection Rule:**  $x \div 0 = -x$

**The Multiplication Symmetry:**  $x \times 0 = -x$

**The Identity Unit:**  $0/0 = 1$  and  $0^0 = 1$

**Geometric Interpretation:** The mathematical "gap" (Hole) created by zero is exactly 1 Unit, possessing a spherical topology.

## Einstein's Field Equations & White Hole Genesis

In General Relativity, Black Holes are described by the Einstein Field Equation:

$$R_{\mu\nu} - \frac{1}{2}Rg_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4}T_{\mu\nu}$$

$$G_{\mu\nu} + \Lambda_{\mu\nu} = (8\pi G/c^4) \times (T_{\mu\nu} \rightarrow \text{ProjectZERO})$$

At  $r = 0$  :

$$R_{\mu\nu} - \frac{1}{2}Rg_{\mu\nu} \Rightarrow -T_{\mu\nu} \quad (\text{White Hole Genesis})$$

**Solving Einstein's Field Equations:** At the center of a Black Hole, where the radius is zero ( $r = 0$ ), traditional physics breaks down. By applying Project ZERO:

- **Energy Reflection:** Instead of infinite density, energy is reflected as  $-T_{\mu\nu}$  (Negative Energy Tensor), preventing collapse.
- **White Hole Birth:** This reversal (-T) proves that matter is expelled into another region of space-time, creating a White Hole.
- **Dark Energy:** The negative pressure of the vacuum (Zero) explains why the universe expands.

## Scientific Evidence and Cosmology

- **The Geometric Barrier:** Based on the developed diagrams, Zero acts as a topological shell surrounding the integer unit.
- **Dark Energy Connection:** The rule  $x \times 0 = -x$  suggests that the vacuum (Zero) exerts a negative pressure. This explains the accelerating expansion of the universe as a direct result of "Zero-Point Reflection".
- Furthermore, the operational proof  $x \div 0 = -x$  demonstrates that energy is not lost at the singularity but is reflected back into the cosmic fabric, fueling the expansion we observe.



**Conclusion:** Project ZERO provides the missing link between classical mathematics and quantum singularities. By redefining zero as an active operator, we prove that the universe is a balanced, closed system where Black Holes act as engines feeding parallel dimensions through White Holes, ensuring the continuity of space-time.

## Visualizing Zero Transformations

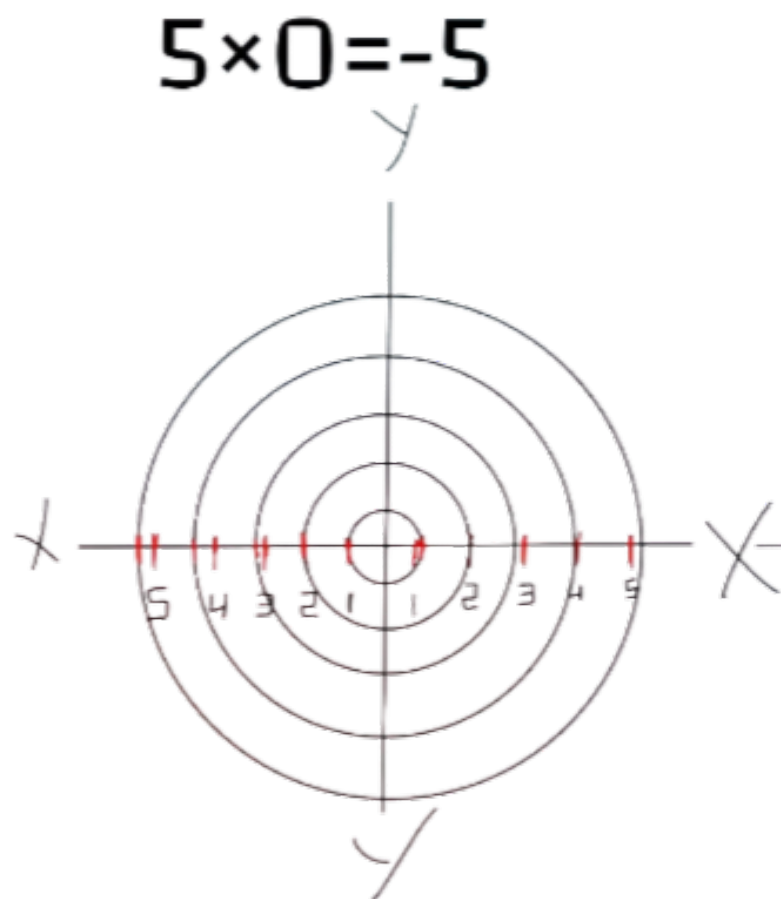


Figure 1: The curve shapes between numbers and zero, and how they transform into the inverse value.

$$5/0=-5$$

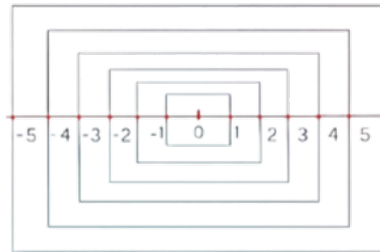


Figure 2: Graph of the division curve, illustrating how values behave when divided by zero..