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# Gooney Ducks and Naked Physicists

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## Part VII Houston, We Have a Problem!

**Written by D. and S. Birks  
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Editing contributions by Daniel Birks

Abstract: An allegory of modern science.

## *Part VII*

I can't resist. I just gotta say it:

“HOUSTON, WE HAVE A PROBLEM!”

“There's a major technical fault in the mathematical system!

The language of math has been corrupted!

Access to the truth tanks has been compromised!”

“Running a level one diagnostics. Initiating shut down. Stand by.

Is there a leak in the supply line? Has the switch jammed? How do we fix this thing?

Where's MacGyver when you need him?” (Voices fade, lost in a crackle and fizz of static...)

Wow! Somewhere in the chase for infinity, in the race to create a math for imagination and theory, the truth got left behind! Our connection to truth has been lost!

Maybe it happened in all the excitement and hubbub of the Scientific Revolution.

I looked that up on Wikipedia and found what Galileo said about mathematics:

*I believe its knowledge equals the Divine in objective certainty.*

So where is the objective certainty of today's math?

Where do I find that? Infinity, approximation, adequacy, probability, uncertainty, and theories that use the squaring of time, velocity, and mass, with no proofs of this squaring?

Certainty isn't what comes to mind when I think of theoretical physics and calculus.

The only certainty seems to be that the uncertain remains uncertain.

I looked up calculus again. I came across another quote from the “quantum dude,”

John von Neumann:

*The calculus...still constitutes the greatest technical advance in exact thinking.*

Hmm...am I missing something here?

Maybe I'm not understanding what is considered as certainty or exactness in mathematics.

Is it the same as truth? Does exactness equal truth?

I wonder: What constitutes truth in mathematics?

What is truth?

Boy oh boy oh boy! Here it is! The question of the ages—the all-time biggie—pondered by the greatest minds of history.

What is truth?

I'm tempted to call Eva. I wonder what she'd say. I might even stump her with this one. Better not. She'd probably just remind me again about tonight. Maybe I oughta just look it up. Somebody out there might already have the answer.

The first definition I found was: *God is truth.*  
Can't argue with that.

Another definition was: *Truth is a fact or reality.*

And Webster's defined truth as:

*A verified or indisputable fact, proposition, principle, or the like: mathematical truths.*

Aha! This gives me something to work with.

If I look at the ratio of a circle's circumference to its diameter, pi, or  $\pi$ .  
Pi is certainly a truth—it's a verified or indisputable fact—but it's certainly not exact.  
Pi is an unresolved approximation. The truth is, pi is a fact that's not exact.  
Wow! So exactness doesn't always equate to mathematical truth!

On the other hand, if I look at theoretical physics' squaring of time, velocity, and mass:  
All these can be calculated exactly, but they're certainly not verified or indisputable facts.  
The truth is, not being proven, these "facts" remain unproven theory.  
Hmm...imagination and theory can be calculated exactly, yet still not be true.

Boy howdy, Grasshopper: Inexactness can be truth, and exactness can be untruth?  
Now there's some pretzel logic, oh yeah!

So what is the truth, then?

If truth is a fact, and fact is the opposite of theory, do truth and theory go together at all?

Where does that leave theoretical physics?

Yeah, how do you express imagination or theory and still maintain truth in mathematics?