There is only one

A zine for those who want to
become one with one.

"One One" was a racehorse,
"One Two" was one too.
"One One" won one race.
12112

1   Motivation

In their 1985 single, "One Vision", the British rock band *Queen* outlined the following research program:

So give me your hands, give
me your hearts
I'm ready!
There's only one direction
One world and one nation
Yeah, one vision

– Queen, "One Vision"

1 Foundations

Definition 1.1. For anyone,

$$1 + 1 = 1$$
$$1 - 1 = 1$$
$$1 \div 1 = 1$$
$$1 \times 1 = 1$$

There is only one function, and it is 1-to-1.

$$f(1) = 1$$

and one relation: $1 = 1$

1   Calculus

Theorem 1.1. *Every sequence converges.*

Proof. Consider a sequence: $1, 1, \ldots$. $\forall \varepsilon = 1$, we have:
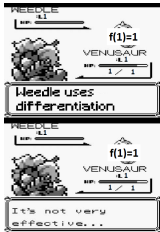
$$|1 - 1| = |1| = 1 = \varepsilon$$

$\square$

Corollary 1.1. *Every series converges.*

This is left as an exercise to the reader.

1 Derivatives

$$f'(1) = \lim_{h \to 1} \frac{f(h+1) - f(1)}{1}$$

1   Topology and Geometry

Here is a true statement:

> There exist two manifolds, M^m and N^n with $n > m$, but $N = M \setminus \{*\}$
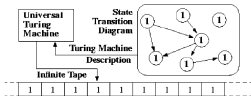
Here is another true statement

All manifolds are isomorphic.

Q: What do you call an empty manifold?
A: Pointless.

1   Complexity

One makes computers more efficient if one removes the useless 0's between the 1's. Here's a turing machine:

Corollary 1.1. *The halting problem is solvable.*

Proof. Halt at 1. □

1 Algebra

There is only one group. Hey look! It's your friend group!

You
•

The one ring.

Did you miss it?

Thanks for calling.

1 The Riemann Hypothesis

Consider the function:

$$\zeta(s) = \sum \frac{1}{n^s}$$

we wish to find places where

$$\zeta(s) = 1$$

Plug in $s = 1$, and we're done.

This has many applications in the distribution of the single prime number, 1.

1   P vs. NP

One provides a solution to the Boolean satisfiability problem.

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True=1, False=1
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One verifies the satisfiability of any formula in $O(1)$ time.

FNP, PML, L
P, NP, N, FL
FLQ, FP, NL

1   Algebra

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