### How to Get Rid of Ghosts

Mathematics Conference for the Mysterious and Magical

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My motivation in giving this talk is to get a Ph.D.  $\dots$ 

Here is my definition...

### Definition (Ph.D.)

A Ph.D. is something you sweat and cry for.

# Example

I studied so hard for my qualifying exam I replaced my childhood memories with an entire chapter of Hartshorne's Algebraic Geometry.

# Theorem (D.)

For all n, we have  $n^2 = n \cdot n$ .

Proof. With massive loss of generality, let n=1. Then we have

$$1 = 1^2 = 1 \cdot 1 = 1$$

Therefore by overwhelming hope, it must always be true.

Most algebra you need to be true is true.

# Corollary

For all  $n, m \in \mathbb{N}$ ,  $(n + m)^2 = n^2 + m^2$ .

• Bleach is mostly water.

- Bleach is mostly water.
- 2 We are mostly water.

Now we pause for the big reveal...  $\,$ 

- Bleach is mostly water.
- 2 We are mostly water.
- **3** Therefore, we are bleach.

Now we pause for the big reveal...  $\,$ 

- Bleach is mostly water.
- We are mostly water.
- Therefore, we are bleach.

Now we pause for the big reveal...

- I am clearly a master of logic.
- Masters of logic get Ph.D's.
- I have earned this.

#### Finally! Some Math!

Here is some Math:  $\int_1^{\alpha} \frac{x^2}{\sin x^2} dx$  and  $\sum i^2$ .

But you could make this Math big inline with 'displaystyle':

$$\int_{1}^{\alpha} \frac{x^2}{\sin x^2} dx \text{ and } \sum i^2.$$

And even more Math:

$$\oint \vec{\nabla} \times \vec{F} \; dV = \sum_{n=1}^{\infty} \overline{p} \begin{pmatrix} a & b \\ c & d \end{pmatrix}$$

Ph.D. plz...

Questions?