Measurement

With the simple act of using a tape measure or a scale, we bridge a great divide between the lofty abstractions of mathematics and the physical world. There is something very interesting and important going on here that is easily overlooked because of the familiarity of measuring. We are saying that not only do these strange entities called numbers capture the notion of “quantity,” further there are physical attributes whose quantities correspond exactly to numbers; that attributes like size lie on a scale, and that scale is the real number line.

We are so familiar with things like “foot” and “pound” that it helps to consider physical attributes which were at one time not understood clearly enough to be assigned numbers, and physical attributes that have not yet been understood so clearly, but that people treat like numerical quantities anyway.

\*\* enter Neuman quote \*\*

Are you excited about metrology yet? Anyway, here’s how you do it, “it” being “pin down the physical world and bottle it into indelible platonic ideals and keep it there for all posterity and defeat its damned shifting complexity.”

# Dimensional Analysis

## Dimension vs. Unit

You cannot add 5 seconds to 5 centimeters no matter how hard you try. They’re different physical dimensions. Not, like, “dimension c-137” dimensions – for this sense you should use “universe”. This prior usage is a clear indication that you have no technical education. Please stop using it.

Dimension (in measurement) := A type of physical quantity. Length, mass, time, electric charge, etc.

A unit is

“So I told him, ‘gimme the blemflarks’, ya know, it’s, this guy doesn’t understand interstellar currency.” – nondescript alien, Rick and Morty episode 1

# Accuracy and Precision

## Significant Figures

## Error Calculation

## Scientific Notation