## 0.1 Remainders

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Division is defined between natural numbers. However there are many cases where this division does not map to a natural number. For example:

$\frac{7}{3}$

We can divide 6 of the 7 by 3, giving 2 with 1 remaining.

Alternatively we can divide 3 of the 7 by 3, giving 1 with 4 remaining

Or we could divide 0 of the 7 by 3 giving 0 with 7 remaining.

The remainder refers to the lowest possible number - in this case 1.