

Mash

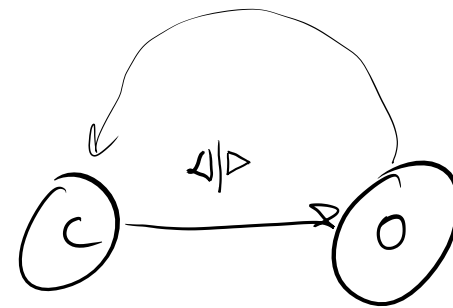
delete almost all information



Symbol - identity

set of symbol

(state, state)



(c, o)

Primality
integers

Positive
Prime number
= 2 factors
1
self

x is a factor of y
 $\rightarrow y \% x == 0$

2, 3, 5, 7, 11, 13, 17, 19, 23...

2102

2 · 1051

Fundamental Theorem of Arithmetic

each $x \in \mathbb{Z}^+$ has a unique prime factorization
multiset of primes

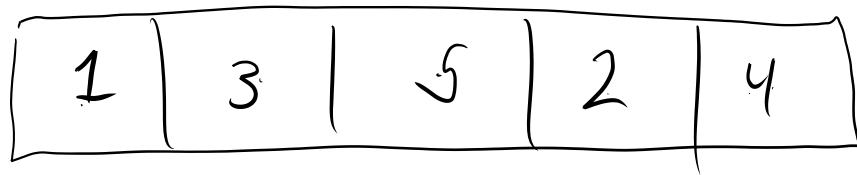
$$1112 = 2 \times 2 \times 2 \times 139$$

$$[2, 2, 2, 139]$$

x and y are relatively prime if x & y share no non-trivial factors
(coprime)

14
2 · 7

15
3 · 5



2, 5 are rel

Fractions

$$\frac{14}{18} \xrightarrow{\begin{array}{c} \cancel{2} \cdot 7 \\ \cancel{2} \cdot 3 \cdot 3 \end{array}} \frac{7}{9}$$

Canonical

1.99999999 ...

2.000 ...

$$\begin{array}{r} 1 \\ 001 \\ + 001 \\ \hline \end{array}$$

log

$$f(a) = a^b$$

$$f^{-1}(b) = \log_a b$$