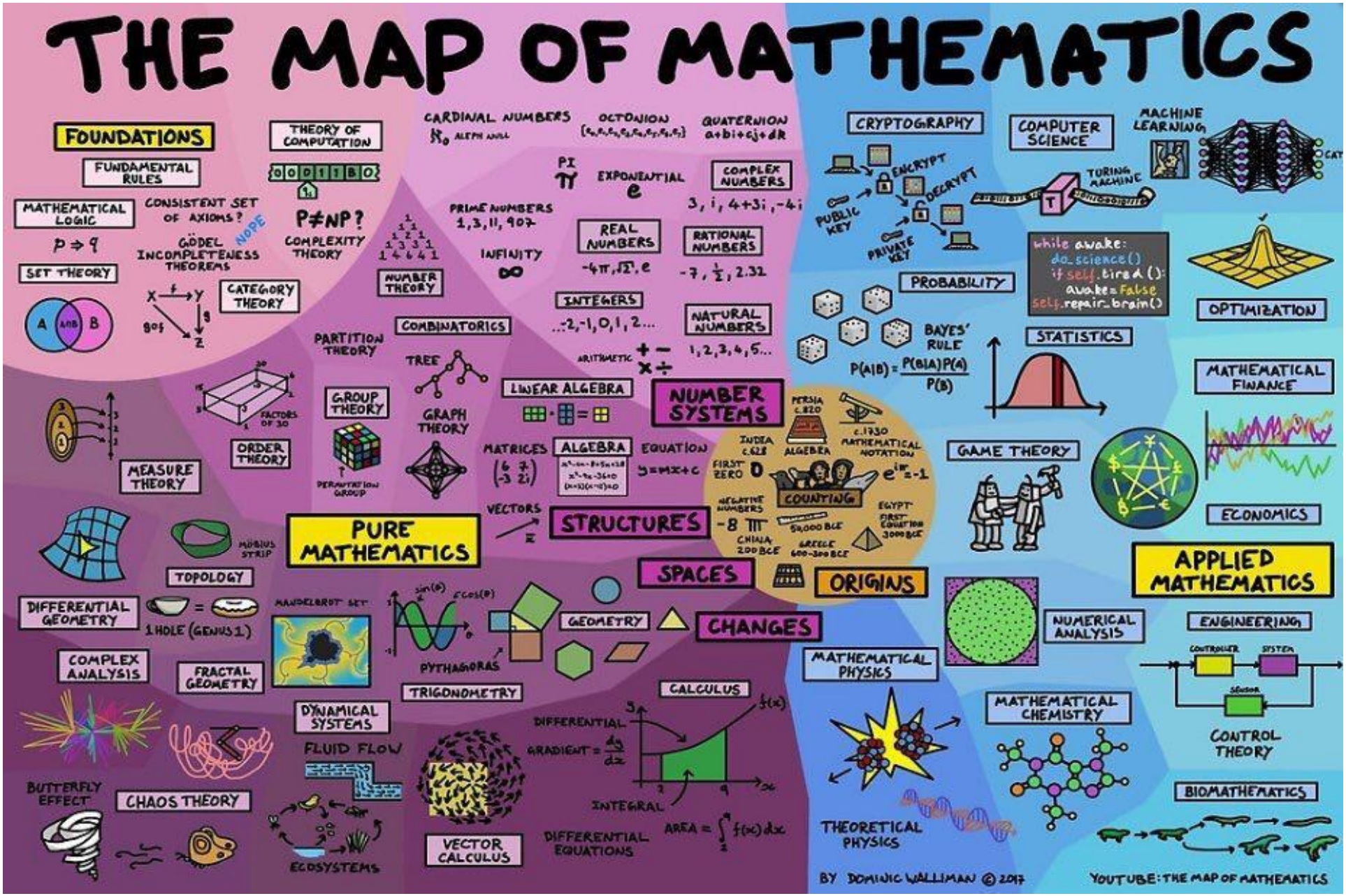
THE MAP OF MATHEMATICS
FOUNDATIONS
FUNDAMENTAL RULES
MATHEMATICAL LOGIC
P ⇒ Q
CONSISTENT SET OF AXIOMS?
NOPE
GÖDEL INCOMPLETENESS THEOREMS
SET THEORY
A ∩ B
CATEGORY THEORY
THEORY OF COMPUTATION
P≠NP?
COMPLEXITY THEORY
CARDINAL NUMBERS
ALEPH NULL
OCTONION
QUATERNION
a+bi+cj+dk
PI
EXPONENTIAL
e
COMPLEX NUMBERS
3, i, 4+3i, -4i
PRIME NUMBERS
1,3,11,907
INFINITY
REAL NUMBERS
-4π, √2, e
RATIONAL NUMBERS
-7, ½, 2.32
NUMBER THEORY
INTEGERS
...-2,-1,0,1,2...
NATURAL NUMBERS
1,2,3,4,5...
ARITHMETIC
COMBINATORICS
PARTITION THEORY
TREE
GRAPH THEORY
GROUP THEORY
PERMUTATION GROUP
ORDER THEORY
FACTORS OF 30
MEASURE THEORY
LINEAR ALGEBRA
NUMBER SYSTEMS
MATRICES
ALGEBRA
EQUATION
y=mx+c
VECTORS
PURE MATHEMATICS
STRUCTURES
SPACES
CHANGES
ORIGINS
INDIA c.628
FIRST ZERO 0
PERSIA c.820
ALGEBRA
c.1730 MATHEMATICAL NOTATION
COUNTING
NEGATIVE NUMBERS
-8
CHINA 200 BCE
50,000 BCE
EGYPT FIRST EQUATION 3000 BCE
GREECE 600-300 BCE
MÖBIUS STRIP
TOPOLOGY
DIFFERENTIAL GEOMETRY
1 HOLE (GENUS 1)
MANDELBROT SET
COMPLEX ANALYSIS
FRACTAL GEOMETRY
PYTHAGORAS
TRIGONOMETRY
GEOMETRY
DYNAMICAL SYSTEMS
FLUID FLOW
BUTTERFLY EFFECT
CHAOS THEORY
ECOSYSTEMS
VECTOR CALCULUS
CALCULUS
DIFFERENTIAL
GRADIENT
INTEGRAL
DIFFERENTIAL EQUATIONS
CRYPTOGRAPHY
ENCRYPT
DECRYPT
PUBLIC KEY
PRIVATE KEY
COMPUTER SCIENCE
TURING MACHINE
MACHINE LEARNING
CAT
while awake:
do_science()
if self.tired():
awake = False
self.repair_brain()
PROBABILITY
BAYES' RULE
P(A|B) = P(B|A)P(A) / P(B)
STATISTICS
OPTIMIZATION
MATHEMATICAL FINANCE
GAME THEORY
ECONOMICS
APPLIED MATHEMATICS
NUMERICAL ANALYSIS
ENGINEERING
CONTROLLER
SYSTEM
SENSOR
CONTROL THEORY
MATHEMATICAL PHYSICS
MATHEMATICAL CHEMISTRY
BIOMATHEMATICS
THEORETICAL PHYSICS
BY DOMINIC WALLIMAN © 2017
YOUTUBE: THE MAP OF MATHEMATICS