Simulators for the Teaching of Mathematics

1st cycle

Proper Fraction, Improper and Mixed Numeral
Integer division algorithm (I)
Integer division algorithm (II)
Explore the integer division algorithm
Addition algorithm
Arabic and Roman numeral system
Digital and analog clock
Facial symmetry
Assembling the scissors (symmetry)
Stem and leaves diagram
Kaleidoscope!
Multiple-submultiple converter
Perimeter and Area

2nd cycle

Irreducible fraction
Multiplication of fractions
Average as equitable distribution
Average as a break-even point
All about triangles
All about convex quadrilaterals
Pi!
Regular solids and their planifications
Some cube planifications
Areas and Volumes of Solids
faces | vertices | arestas de prismas Pyramids
Construction of the bisection
Construction of triangles
Rotation in the plane
Notion of power
Rules for operating with powers
Decomposition into prime factors

3rd cycle

Addition and Subtraction of Integers (simplification of writing)
Numerical Line
Representation of fractions on the number line
Framing of square roots
Representation of irrational numbers (square root) on the line
Intervals of Real Numbers and the Number Line
Meeting and intersection of ranges of real numbers
Algebraic Balance
Pi and Archimedes
Probabilities: Calculating the value of Pi via the Monte Carlo method
Cartesian reference
Equation of the line and the reference frame
Resolving formula and discriminant binomial
Angles and arcs on the circumference
Right triangle trigonometry
A Quadrant for Quarantine
Complete sequence and discover general term (Arithmetic Succession)
Isometry: Composition of axial reflections
Homotety
Diagram of extremes and quartiles
Histogram
Arithmetic mean – visual interpretation
Bar charts and location measures
All about triangles
Cevians of a triangle
All about convex quadrilaterals
Lines and planes and relative positions
Areas and Volumes of Solids
Symmetries: Spirograph
Is it or isn't it function?
Algebraic expression of function
Graphic-the walk of Ana
Determine line equation

Secondary

Permutation, arrangement and combination
Conical
Vector equation of the line and the plane
Notion of derivative of a function at a point
Notion of limit of a function - examples
Complete study of affine functions, quadratic, modulus, square root, cube root , , rational
Traveling salesman problem
Book 10th grade
Gauss elimination method (linear system of order 2)
Pi and Leibniz (convergent infinite series for Pi)