

Concepts to Mathematical Tools to References Elementary List

Algebra/patterns – calculators, computers/Internet/software/spreadsheets, base-ten blocks, games/puzzles/toys, pattern blocks, attribute blocks, tangrams, cubes/Unifix cubes, color tiles, Cuisenaire rods, ten-frames, counters, hundreds chart/math tables/number lines/10x10 grid/circle chart, geoboards, geometric shapes, books/journals/newspapers/portfolios

Algorithms – computers/Internet/software/spreadsheets, games/puzzles/toys, calculators

Angles – protractors, compasses, geoboards, miras/mirrors/reflective material, pattern blocks, books/journals/newspapers/portfolios, paper/origami/stencil patterns/graph paper, tangrams, rulers/straightedge/tape measures/meter sticks/trundle wheels/calipers

Area/surface area – geoboards, color tiles, base-ten blocks, cubes/Unifix cubes, tangrams, pattern blocks, rulers/straightedge/tape measures/meter sticks/trundle wheels/calipers, fraction models/circles, color tiles, cubes/Unifix cubes, games/puzzles/toys, geometric shapes, paper/origami/stencil patterns/graph paper

Cardinal/ordinal/nominal numbers – counters, calculators, games/puzzles/toys

Classification/sorting/making sets – attribute blocks, cubes/Unifix cubes, pattern blocks, tangrams, counters, Cuisenaire rods, geometric solids, money, base-ten blocks, cardboard/boxes, geoboards, books/journals/newspapers/portfolios, miras/mirrors/reflective material, paper/origami/stencil patterns/graph paper, games/puzzles/toys, geometric shapes, dice/number cubes, balance scale/weights/scales, building blocks/Lego, play centers, color tiles, capacity containers, computers/Internet software, polyhedrons/nets, fraction models/circles, chalkboard/metal chalkboard/flannel board/magnet board, calculators

Coordinate/analytic geometry – geoboards, paper/origami/stencil patterns, graph paper

Constructions – compasses, protractors, rulers/straightedge/tape measures/meter sticks/trundle wheels/calipers, miras/mirrors/reflective material, books/journals/newspapers/portfolio/learning logs, building blocks/Lego, geoboards, tangrams

Counting/skip-counting/one-to-one correspondence – cubes/Unifix cubes, counters, color tiles, Cuisenaire rods, spinners, ten-frames, dice/number cubes, money, calculators, building blocks/Lego, candy/food, play centers, base-ten blocks, geometric solids, geometric shapes, polyhedrons/nets, pattern blocks, geoboards, games/puzzles/toys, capacity containers, computers/Internet software, balance scale/weights/scales, books/journals/newspapers/portfolios, tangrams, rulers/tape measures/trundle wheels/calipers

Data collection/management/graphing/interpretation – counters, attribute blocks, balance scale, base-ten blocks, capacity containers, color tiles, thermometers, geoboards, candy/food, counters, books/journals/newspapers/portfolios, money, geometric shapes, games/puzzles/toys, chalkboard/metal chalkboard/flannel board/magnet board, paper/origami/stencil patterns/graph paper, polyhedrons/nets, computers/Internet/software/spreadsheets, dice/number cubes, pattern blocks

Decimals – base-ten blocks, money, calculators, dice/number cubes, spinners, pattern blocks, calculators, candy/food, hundreds chart/math tables/number lines/10x10 grid/circle chart, balance scale/weights/scales

Equality/equivalence/inequality/equations – calculators, counters, balance scale, color tiles, money, cubes/Unifix cubes, Cuisenaire rods, fraction models/circles, geoboards, hundreds chart/math tables/number lines/10x10 grid/circle chart, games/puzzles/toys, polyhedrons/nets, candy/food, computers/Internet/software/spreadsheets

Estimation – color tiles, geoboards, balance scale/weights/scales, capacity containers, rulers/tape measures/trundle wheels/calipers, Cuisenaire rods, calculators, counters, building blocks/Lego, money, paper/origami/stencil patterns/graph paper, cubes/Unifix cubes, games/puzzles/toys, fraction models/circles, hundreds chart/math tables/number lines/10x10 grid/circle chart, computers/Internet/software/spreadsheets

Fact strategies/turnaround facts – ten-frames, counters, games/puzzles/toys, cubes/Unifix cubes, spinners, dice/number cubes, money, calculators, hundreds chart/math tables/number lines/10x10 grid/circle chart, fraction models/circles, geoboards

Fractions – fraction models/circles, pattern blocks, base-ten blocks, geoboards, capacity containers, clocks/stopwatches/calenders, color tiles, cubes/Unifix cubes, Cuisenaire rods, thermometers, money, tangrams, calculators, dice/number cubes, spinners, counters, pattern blocks, candy/food, hundreds chart/math tables/number lines/10x10 grid/circle chart, computers/Internet/software/spreadsheets, books/journals/newspapers/portfolios, rulers/tape measures/trundle wheels/calipers, paper/origami/stencil patterns/graph paper

Geometry – attribute blocks, calculators, cubes/Unifix cubes, capacity containers, compasses, Cuisenaire rods, fraction models/circles, games/puzzles/toys, geoboards, geometric shapes, geometric solids, mirrors/mirrors/reflective material, paper/origami/stencil patterns/graph paper, pattern blocks, polyhedrons/nets, tangrams, rulers/tape measures/trundle wheels/calipers, building blocks/Lego, books/journals/newspapers/portfolios, tangrams, candy/food, capacity containers, color tiles

Measurement/scale – balance scale/weights/scales, rulers/straightedge/tape measures/meter sticks/trundle wheels/calipers, capacity containers, thermometers, clocks/stopwatches/calenders, geometric solids, base-ten blocks, books/journals/newspapers/portfolios, color tiles, polyhedrons/nets, tangrams, counters, paper/origami/stencil patterns/graph paper, building blocks/Lego, play centers, calculators, computers/Internet/software/spreadsheets, candy/food

Mental math – ten-frames, dice/number cubes, spinners, mirrors/mirrors/reflective material, cubes/Unifix cubes, money, paper/origami/stencil patterns/graph paper, games/puzzles/toys, geometric shapes, counters, hundreds chart/math tables/number lines/10x10 grid/circle chart, books/journals/newspaper/portfolios/learning logs, fraction models/circles, geoboards

Money – money, candy/food, calculators, books/journals/newspaper/portfolios/learning logs, games/puzzles/toys, hundreds chart/math tables/number lines/10x10 grid/circle chart, balance scale/weights/scales, base-ten blocks, cubes/Unifix cubes, building blocks/Lego

Number concepts/operations – cubes/Unifix cubes, counters, spinners, calculators, base-ten blocks, Cuisenaire rods, fraction models/circles, color tiles, ten-frames, money, balance scale/weights/scales, geometric solids, rulers/straightedge/tape measures/meter sticks/trundle

wheels/calipers, dice/number cubes, candy/food, play centers, building blocks/Lego, geoboards, clocks/stopwatches/calenders, chalkboard/metal chalkboard/flannel board/magnet board, tangrams, attribute blocks, fraction models/circles, books/journals/newspaper/portfolios/learning logs, games/puzzles/toys, hundreds chart/math tables/number lines/10x10 grid/circle chart, computers/Internet/software/spreadsheets

Odd/even/prime/composite numbers – color tiles, cubes, Cuisenaire rods, counters

Perimeter/circumference – geoboards, color tiles, tangrams, pattern blocks, fraction circles, rulers/straightedge/tape measures/meter sticks/trundle wheels/calipers, cubes/Unifix cubes, computers/Internet/software/spreadsheets, books/journals/newspapers/portfolios, base-ten blocks, paper/origami/stencil patterns/graph paper

Place value – base-ten blocks, ten-frames, Cuisenaire rods, cubes/Unifix cubes, counters, money, abacus, hundreds chart/math tables/number lines/10x10 grid/circle chart, color tiles, calculators, computers/Internet/software/spreadsheets, candy/food, geometric shapes

Probability/chance – spinners, dice/number cubes, fraction models/circles, color tiles, counters, money, cubes/Unifix cubes, games/puzzles/toys, books/journals/newspapers/portfolios, computers/Internet/software/spreadsheets, capacity containers, geometric shapes

Problem solving/thinking skills – money, pattern blocks, tangrams, games/puzzles/toys, base-ten blocks, geometric solids, books/journals/newspapers/portfolios, dice/number cubes, balance scale/weights/scales, mirrors/mirrors/reflective material, calculators, cubes/Unifix cubes, spinners, paper/origami/stencil patterns/graph paper, building blocks/Lego, geoboards, candy/food, Cuisenaire rods, fraction models/circles, abacus, hundreds chart/math tables/number lines/10x10 grid/circle chart, cardboard/boxes, play centers, computers/Internet/software/spreadsheets, capacity containers, thermometers, color tiles, counters, ten-frames, rulers/tape measures/trundle wheels/calipers

Quantity – cubes/Unifix cubes, books/journals/newspapers/portfolios, building blocks/Lego, computers/Internet/software/spreadsheets, counters, candy/food, games/puzzles/toys

Ratio/proportion/percent – color tiles, cubes/Unifix cubes, Cuisenaire rods, tangrams, pattern blocks, counters, base-ten blocks, ten-frames, money, books/journals/newspapers/portfolios, building blocks/Lego, geoboards, polyhedrons/nets

Reasoning – attribute blocks, Cuisenaire rods, tangrams, dice/number cubes, spinners, geoboards, pattern blocks, counters, money, games/puzzles/toys, cardboard/boxes, geometric solids, books/journals/newspapers/portfolios, paper/origami/stencil patterns/graph paper, calculators, base-ten blocks, fraction models/circles, thermometers, hundreds chart/math tables/number lines/10x10 grid/circle chart, balance scale/weights/scales, capacity containers, color tiles, rulers/tape measures/trundle wheels/calipers, building blocks/Lego

Relationships/connections – pattern blocks, base-ten blocks, geoboards, clocks, color tiles, cubes, Cuisenaire rods, money, tangrams, calculators, number cubes, spinners, counters, math balance, calculators, two-color, balance scale, games/puzzles/toys, cubes, fraction models, spinners

Similarity/congruence – geoboards, attribute blocks, pattern blocks, tangrams, Cuisenaire rods, mirrors/mirrors/reflective material, color tiles, cubes/Unifix cubes, games/puzzles/toys, geometric

solids, geometric shapes, paper/origami/stencil patterns/graph paper, polyhedrons/nets, counters, building blocks/Lego, dice/number cubes, fraction models/circles, hundreds chart/math tables/number lines/10x10 grid/circle chart, rulers/tape measures/trundle wheels/calipers, books/journals/newspapers/portfolios

Spatial visualization – tangrams, pattern blocks, geoboards, geometric solids, polyhedrons/nets, games/puzzles/toys, mirrors/mirrors/reflective material, cubes/Unifix cubes, color tiles, base-ten blocks, bean counters, counters, geometric shapes, books/journals/newspapers/portfolios, paper/origami/stencil patterns/graph paper

Symmetry – geoboards, pattern blocks, tangrams, mirrors/mirrors/reflective material, cubes/Unifix cubes, paper/origami/stencil patterns/graph paper, computers/Internet/software/spreadsheets, attribute blocks, Cuisenaire rods, games/puzzles/toys, geometric shapes

Tessellations/tiling – pattern blocks, attribute blocks, games/puzzles/toys, paper/origami/stencil patterns/graph paper

Transformational geometry – geoboards, cubes/Unifix cubes, mirrors/mirrors/reflective material, pattern blocks, tangrams, paper/origami/stencil patterns/graph paper, polyhedrons/nets, building blocks/Lego, geometric solids, cardboard/boxes

Volume – capacity containers, cubes/Unifix cubes, geometric solids, rulers/straightedge/tape measures/meter sticks/trundle wheels/calipers, counters, candy/food

Weight/mass – geometric solids, counters, balance scale/weights/scales, cubes/Unifix cubes