Mathematics — Syllabus Guide for Parents

LKG to Class 10 · What your child will be tested on, and how

What This Olympiad Tests

The iThinkers Mathematics Olympiad checks whether your child can **think** with numbers, shapes and data — not just remember formulas. Every question is set in a real-life situation (shopping, sports, school life, travel) and is built strictly from what your child is already taught in school (NCERT / CBSE / major state boards). Nothing is out of syllabus; the questions are simply asked in a way that checks understanding, not memorisation.

Exam Format at a Glance

Format	30 to 45 Multiple Choice Questions, 1 mark each, depending on class
Duration	45 minutes (LKG–UKG MiniVerse: 25 minutes, pictorial paper)
Negative marking	None — every attempt counts, so children can try every question with confidence
Answer sheet	OMR sheet, filled with a 2B pencil
Youngest learners	LKG–UKG papers are fully pictorial; the invigilator may read questions aloud

The Skill Areas Your Child Will Build

Every question — from LKG to Class 10 — falls under one of these four skill areas. They stay the same every year, so you can watch your child's growth along a single thread as they move up the classes.

Skill Area	Starts as (early years)	Grows into (by Class 10)
Quantity	Counting, and telling more/less	Real numbers and everyday commercial maths (bills, interest, profit-loss)
Space & Shape	Matching shapes, position words (in/on/under)	Trigonometry and coordinate geometry
Change & Relationships	Simple patterns — what comes next?	Quadratic equations and number progressions (savings, growth)
Uncertainty & Data	Sorting things into groups	Statistics and probability — reading and judging real data

How We Ask Questions

iThinkers questions are not about memorising facts. Each question is designed to check one of these four thinking abilities:

How questions are asked	What it means for your child
Do the Maths	Carry out a calculation or procedure correctly — the foundation skill every child needs first.
Set It Up	Read a real situation and choose the right sum, expression or method to use — not just crunch numbers someone else has already set up.
Judge the Result	Look at an answer, a graph or a claim and decide if it makes sense — catching a misleading graph, an unreasonable answer, or a shaky claim.
Connect Ideas	Spot a pattern, generalise a rule, or link two ideas together to reach a conclusion.

What Your Child Will Learn, Class by Class

Find your child's class below to see exactly which topics are covered. These are the same topics your child's school already teaches (NCERT/CBSE/state-board common core) — iThinkers simply asks about them in a more thoughtful, real-life way.

LKG	iThinkers MiniVerse · age ~4–5
Quantity	Counting 1–10, recognising numbers, more/less/same, matching one-to-one
Space & Shape	Basic shapes (circle, square, triangle, rectangle), big/small, position words (in/on/under, top/bottom, inside/outside)
Change & Relationships	Simple repeating patterns, what comes next
Uncertainty & Data	Sorting by one feature (colour, size, kind), spotting the odd one out

UKG	iThinkers MiniVerse · age ~5–6
Quantity	Numbers 1–20, number names 1–10, before/after/between, picture addition & subtraction within 10, comparing more/fewer
Space & Shape	More shapes (oval, semicircle), everyday solid shapes (ball, box), tall/short, heavy/light, left/right
Change & Relationships	Growing and repeating patterns, simple number patterns (2, 4, 6…) shown with pictures
Uncertainty & Data	Sorting by two features, simple picture graphs (which row has more?)

Class 1	age ~6–7
Quantity	Numbers to 99, tens & ones, addition/subtraction within 20, 2-digit sums without regrouping, zero, number names, coins & notes
Space & Shape	2D shapes and their sides/corners, 3D shapes by name, comparing lengths
Change & Relationships	Skip counting by 2s and 10s, shape patterns, ordinal numbers (1st–10th)
Uncertainty & Data	Collecting & sorting objects, reading a simple picture graph, days of the week, telling o'clock time

Class 2	age ~7–8
Quantity	Numbers to 999, hundreds place, addition/subtraction with regrouping, multiplication as equal groups, tables of 2/3/4/5/10, sharing/division, money totals & change
Space & Shape	Shape properties, straight & curved lines, standard units (cm/m, kg, litre)
Change & Relationships	Skip counting by 3s/4s/5s, odd/even numbers, growing picture patterns
Uncertainty & Data	Picture graphs, tally marks, reading o'clock & half-past, the calendar

Class 3	age ~8–9
Quantity	Numbers to 9,999, addition/subtraction with regrouping, multiplication tables to 10, division with remainders, fractions (half/quarter/three-quarters), money & simple bills
Space & Shape	2D & 3D shapes (edges, corners, faces), symmetry, reading maps/grids, choosing sensible measurement units, perimeter
Change & Relationships	Number patterns & rules, even/odd properties, simple input-output tables
Uncertainty & Data	Picture graphs & bar charts, tally charts, telling time to 5 minutes, calendar problems

Class 4	age ~9–10
Quantity	Numbers to 6 digits (lakh), factors & multiples, equivalent & comparing fractions, decimals (tenths), money as decimals, unitary thinking (price of one → price of many)
Space & Shape	Angle types (right/acute/obtuse), circle parts, perimeter & area by counting squares, nets of a cube, symmetry
Change & Relationships	Patterns with word-stated rules, multiplication↔division relationships
Uncertainty & Data	Bar graphs, picture graphs with keys, 24-hour clock, timetables

Class 5	age ~10–11
Quantity	Numbers to crores, estimation & rounding, factors/multiples/primes, HCF/LCM basics, unlike fraction addition, decimal operations, unitary method, percentage introduced
Space & Shape	Measuring angles with a protractor, area & perimeter formulas, 3D nets, volume by counting cubes, map scale
Change & Relationships	Extending patterns & finding rules, simple use of symbols for unknowns (■ + 7 = 12)
Uncertainty & Data	Drawing & interpreting bar graphs, line graph basics, average (mean) as equal sharing, chance words (certain, likely, impossible)

Class 6	age ~11–12
Quantity	Large numbers & estimation, whole number properties, factors/multiples/primes, divisibility, HCF & LCM, integers, fraction & decimal operations
Space & Shape	Points/lines/rays/curves, angle types, triangle & quadrilateral classification, symmetry, ruler-compass constructions, perimeter & area
Change & Relationships	Introduction to algebra (variables & expressions), ratio & proportion, patterns & generalisation
Uncertainty & Data	Collecting & organising data, picture & bar graphs, interpreting simple claims, average (mean)

Class 7	age ~12–13
Quantity	All integer operations, fraction & decimal multiplication/division, rational numbers, ratio, unitary method, percentage, profit & loss, simple interest
Space & Shape	Angle pairs, triangle properties, congruence, triangle constructions, area of parallelogram/triangle/circle
Change & Relationships	Simple equations from word situations, algebraic expressions, exponents & powers
Uncertainty & Data	Mean/median/mode, double bar charts, basic probability, rotational symmetry, viewing 3D shapes

Class 8	age ~13–14
Quantity	Rational numbers, squares/square roots, cubes/cube roots, exponents (incl. negative), percentage change, discount, tax, compound interest, direct & inverse proportion
Space & Shape	Quadrilateral properties & constructions, area of trapezium/polygon, surface area & volume of cube/cuboid/cylinder, 3D views
Change & Relationships	Linear equations in one variable, algebraic identities & factorisation, graphs & coordinate plotting
Uncertainty & Data	Grouped data, histograms, pie charts, theoretical probability

Class 9	age ~14–15
Quantity	Number systems (rational & irrational, real number line), laws of exponents, estimation in context
Space & Shape	Coordinate geometry, Euclid's geometry, lines & angles, triangle congruence, quadrilaterals, circles, Heron's formula, surface areas & volumes
Change & Relationships	Polynomials (zeros, remainder & factor theorems), linear equations in two variables
Uncertainty & Data	Statistics (grouped frequency, histograms, mean/median/mode), probability from real data

Class 10	age ~15–16
Quantity	Real numbers (Euclid's division algorithm, fundamental theorem of arithmetic), applied & commercial arithmetic
Space & Shape	Triangle similarity, coordinate geometry (distance, section formula), circles (tangents), constructions, areas related to circles, surface areas & volumes, trigonometry
Change & Relationships	Polynomials, pairs of linear equations, quadratic equations, arithmetic progressions
Uncertainty & Data	Statistics of grouped data, probability, data-based claim evaluation

A Sample Question

Class 6 example: An auto-rickshaw charges ₹25 as a fixed fare, plus ₹12 for every kilometre travelled. Which expression gives the total fare for *k* kilometres?
(a) 37k (b) 25k + 12 (c) **25 + 12k ✓** (d) 12k – 25

This question doesn't just test a calculation — it checks whether a child can read a real situation and build the right mathematical expression for it, a skill far more useful than memorising a formula.

What Makes iThinkers Different

- Real-life, application-based questions that build thinking, not just recall — “Questions that build minds, not just test memory.”
- A free practice portal for every registered child — no extra books to buy, instant feedback, works on any device.
- Deep, question-level reports for parents and teachers — beyond a rank, showing genuine strengths and gaps.
- Children are benchmarked, not ranked against each other — the focus stays on each child's own growth.
- Zero parent contact data collected — only basic student information is used, ever.

This guide is a parent-friendly summary. It does not change or add to what your child's school teaches — every topic here sits inside your child's regular curriculum.