

IVMO 2024 Topic List

The lists are accumulative. At each level topics from previous levels are included. For example, for Intermediate level, all topics in Primary and Junior are relevant.

Lower and Upper Primary	Junior	Intermediate	Senior and Open
Four rules of number $+ - \times \div$	Four rules of mixed numbers $+ - \times \div$	Converting denominators ending in 9	Coefficients in polynomial products
Four rules of simple fractions $+ - \times \div$	Decimal to fraction conversions	Conversion of partially recurring decimals	Using first and last terms in polynomials
*Four rules of decimals $+ - \times \div$	Squaring numbers close to a base	Straight division with 3-digit divisors	Series expansions of binomials
Divisibility by 2, 4, 8, 5, 10, 3, 6, 9	Use of vinculum (bar numbers)	Simultaneous equations	Applications of discriminants of quadratics
Digital roots and division by 9	Nikhilam division	Quadratic equations	Divisibility using Osculation
Multiplication and division by 5, 25, 50	Paravartya division	Nth term for quadratic sequences	Logs and Exponential functions
Nikhilam multiplication	Straight division with 2-digit divisors	Completing the square	Inverse functions
Squaring two-digit numbers ending in 5	Percentages	Difference of two squares	Partial fractions
Multiplication of the final digits add to 10	Direct and Indirect proportion	Cubing 2-digit numbers	Method of differences
Vertically and crosswise multiplication	HCF and LCM by Vertically and crosswise	Combined ratios	Product and Quotient rules
Patterns and sequences	nth term formulae for linear sequences	Polynomial division with binomial divisors	Chain rule
Area and perimeter of simple shapes	Mean, median, mode	Polynomial multiplication	Pythagorean triples
*Primes, squares, and triangular numbers	Simple rules of indices	Factor theorem	Addition and subtraction of angles
*Money	Linear equations	Indices including fractional and negative	Geometric problems involving triples
Word Problems involving all the above	Area and circumference of a circle	Using last digits to check answers	Areas of shapes on coordinate axes
	Angles in parallel lines and quadrilaterals	Angles in polygons	Integration to find areas
	Volume and surface area (cuboids)	Equation of straight lines	Equations of circles
* Not included in Lower Primary		Similar areas and volumes	
Sutras Involved			
All from 9 and the last from 10	Deficiency	By completion and non-completion	First by the first and last by the last
Vertically and crosswise	Transpose and adjust	Particular and general	Product/sum, Sum/product
By one more than the one before	On the flag	Product of means. Product of extremes	Differential calculus
By the last digits	By elimination and retention		Osculation
By addition and subtraction	All the multipliers		
By observation	Proportionately		