

**TEST CONTENT**

<b>A</b>	<p><b>[Analysis]</b> Differentiation, integration, basic differential equations, multivariable functions (partial differentiation, multiple integrals), basic, complex analysis</p> <p><b>[Algebra]</b> Linear equations, determinants, linear conversions, linear space, vector space, curves, curved surfaces, linear programming, quadratics forms, eigenvalues, polynomials, algebraic equations, elementary number theory</p> <p><b>[Statistical Data]</b> Probability, probability distribution, regression analysis, correlation coefficients</p> <p><b>[Other]</b> Application of mathematics to the natural sciences, numerical analysis, algorithm basics, etc.</p>
<b>B</b>	Sequences and limits, functions and limits, various functions (fractional/irrational), composite functions, inverse functions, differentiation, integration, matrices and linear transformations, various curves, complex number planes, basic statistics processing, etc.
<b>C</b>	Proofs, fractional expressions, higher-degree equations, various functions (exponential, logarithmic, trigonometric and higher-degree polynomials), points and lines, circle equations, loci, basic differentiation, basic integration, vectors, complex numbers, probability distributions, statistical inference, etc.
<b>D</b>	Sets, quadratic functions/graphs, quadratic inequalities, trigonometric ratios, data analysis, counting, probability, integer properties, numeral systems, geometric properties, arithmetic sequences, geometric sequences, basic statistics, etc.
<b>E</b>	Square root, expansion and factorization, prime factorization, quadratic equations, Pythagorean theorem, circle properties, similarity, ratio of areas, simple quadratic functions, simple statistics, etc.
<b>F</b>	Simple mixed calculations using algebraic notation, simple linear inequalities, system of equations, parallel line properties, congruent triangles, quadrilateral properties, similarity, linear functions, basic probability, etc.
<b>G</b>	Positive and negative numbers, expressions using algebraic notation, linear equations, basic geometric constructions, translations, line reflection, rotation, arcs and area of sectors, surface area and volume of cones, cylinders, and spheres, direct and inverse proportions using negative numbers, approximate values and error, frequency distributions and histograms, mean values and range, etc.
<b>H</b>	Mixed calculations involving addition, subtraction, multiplication and division using fractions, area of circles, volume of cylinders/prisms, speed, enlargement, symmetry, ratios, proportions and inverse proportions, etc.
<b>I</b>	Mixed calculations involving addition, subtraction, multiplication and division using integers and decimals, divisors and multiples, addition and subtraction of fractions, area of triangles and quadrilaterals, sum of interior angles, volume of cubes and rectangular prisms, averages, polygons, congruent figures, circumference, prisms and cylinders, simple proportion, basic graphs, rates and percentages, etc.
<b>J</b>	Mixed calculations involving addition, subtraction, multiplication and division using integers, addition and subtraction using decimals and fractions with common denominator, rounding numbers, area of rectangles/squares, basic solids, angle measurement, parallel/perpendicular lines, parallelograms, rhombuses, trapezoids, diagrams and line graphs, the relationship between two amounts, etc.
<b>K</b>	Addition/subtraction of integers, multiplication of two-digit numbers, division by one-digit numbers, meaning and expression of decimals and fractions, addition/subtraction of decimals and fractions, calculation of length, weight, and time, circles and spheres, isosceles and equilateral triangles, expression of the relationship between quantitative amounts, tables and bar graphs, etc.

KYU	CONTENT				KYU	CONTENT			
<b>1<sup>st</sup></b>	90%			10%	<b>4<sup>th</sup></b>	30%	30%	30%	10%
	A(B•C)					F	G	H	
<b>Pre-1<sup>st</sup></b>	50%	40%	10%	<b>5<sup>th</sup></b>	30%	30%	30%	10%	
	B	C			G	H	I		
<b>2<sup>nd</sup></b>	50%	40%	10%	<b>6<sup>th</sup></b>	45%		45%	10%	
	C	D			H	I			
<b>Pre-2<sup>nd</sup></b>	50%	40%	10%	<b>7<sup>th</sup></b>	45%		45%	10%	
	D	E			I	J			
<b>3<sup>rd</sup></b>	30%	30%	30%	10%	<b>8<sup>th</sup></b>	45%		45%	10%
	E	F	G		J	K			