

Outline of Mathematics

- * This is an inverted schedule. Compound classes are generally formed by citing first the component which comes latest in the schedule; e.g. Cohomology (AMK) of finite groups (ASD) goes at ASD AK under groups, not cohomology.
- * Most of the literature falls within the Branches of mathematics (AR/AW) and very little within the general concepts of operations, properties, etc. (AM/AQ). So the main role of the 'preliminary' facets in AM/AQ is to act as qualifying terms in the Branches (e.g. Number theory - Integers - Congruences) or as specifiers, defining types of any given thing (e.g. Number theory - Additive number theory).
- * Terms from almost any facet may act as specifiers (e.g. classical, from Methods facet; additive, from Operations facet; homologous, from Relations facet; finite, from Properties facet). Moreover, they may specify not only types of a Branch (or one of its parts) but also concepts from other facets (e.g. a property defining a relation, as in linear representations).
- * Provision is made for all these eventualities; the notation needed for this is displayed clearly in Auxiliary Schedule AM1 (following the main Schedule).
- * Sometimes, the application of Auxiliary Schedule AM1 is interrupted in order to give a prominent class a shorter classmark. All such occasions are indicated in this outline; but for details of what synthetic classmark is replaced & how the normal synthesis is picked up later, see the full schedules.

AM	Mathematics
	. <i>Common subdivisions</i>
AM2 3	. . Study... History... Biography...
9B	. . <i>Relations with other subjects</i>
A	. . . Philosophy of mathematics
	. <i>Agents</i>
M	. . Machines... Computers...
	. <i>Forms of mathematical presentation</i>
AM3 A	. . Theory... Axioms... Formulae...
L	. . Models...
	. <i>Methodologies in mathematics</i>
	. . <i>Philosophical methodologies</i>
P	. . . Foundations of mathematics, Metamathematics
R	. . . . Logicism... Formalism...
T	. . . . Constructivism & intuitionism...
AM4	. . . . Mathematical logic
A	. . . . . Deductive logic
	. . . . . <i>Special properties</i>
AF	. . . . . Effectiveness... Truth functions...
	. . . . . <i>Special operations</i>
EF	. . . . . Formalization... Axiomatics...
FV	. . . . . Problem solving... Algorithms...
GJ	. . . . . Decision procedures...
H	. . . . . Recursion...
J	. . . . . Formal structures
JL	. . . . . Logical calculi
K	. . . . . Propositions... Statements...

	Methodologies in mathematics
	. Philosophical methodologies
	. . . Mathematical logic AM4
	. . . . . Deductive logic AM4 A
	. . . . . Formal structures AM4 J
	. . . . . Propositions... Statements... AM4 K
AM4 MS	. . . . . Formal systems
N	. . . . . Propositional calculus
O	. . . . . Predicate calculus
P	. . . . . Proofs, proof theory...
Q	. . . . . Models, model theory...
T	. . . . Inductive logic
AM5	. . . Set theory
	* For sets as mathematical structures, see ARB.
	. . . . <i>Types</i>
X	. . . . . Axiomatic set theory
	. <i>Methods in mathematics</i>
AM6 2	. . Elementary... Classical... Descriptive...
7	. . Heuristic... Algorithmic... Iterative...
	. . <i>By relation, property, etc</i>
H	. . . Non-standard... Finite...
	. . <i>By branch used</i>
R	. . . Combinatorial... Algebraic...
W	. . . Analytic...
X	. . . Calculus... Differential calculus...
	<i>Operations</i>
AM7 5	. Testing... Synthesis... Solution...
C	. Classification...
H	. Computation... Addition... Factorization...
Q	. Extraction of roots...
R	. Differentiation... Integration...
X	. Ramification... Extension...
	<i>Processes</i>
AM8 6	. Approximation... Continuation...
8	. Variation... Distribution...
B	. Convergence... Interpolation...
GE	. Perturbation...
H	. Optimization...
	<i>Relations</i>
J	. Relation in general...
K	. Mappings (broadly)...
L	. Functions
N9	. . Polynomial functions, Polynomials...
NDX	. . Exponential functions... Potential...
X	. . Functionals... Determinants...
AM9 3	. Forms...
	. <i>Arising from operations on structures</i>
5	. . Transformations... Derivation...
E	. . Extensions... Conjugates...
	. <i>Status relations & relations of magnitude</i>
HE	. . Correspondence... Congruence...
J	. . Equivalence...
L	. . Equations
ME	. . . Differential... Integral...
	* Normal synthesis interrupted; resumes at AM9 MJW.

Mathematics	AM	Relations
		. Status relations & relations of magnitude
		. . Equations AM9 L
		. . . Differential... Integral... AM9 ME
AM9 MJW		. . . <i>Other types of equations</i>
MN9		. . . . Polynomial equations...
MNA		. . . . Linear... Quadratic...
N		. . Inequalities... Inverse... Proportion...
		. <i>Relations of structure, composition</i>
R		. . Generalizations... Representations...
		. <i>Spatial relations, location</i>
T		. . Packing & covering... Incidence...
WM		. . Immersions... Embedding...
		. <i>Functional relations, association</i>
AMB		. . Homomorphisms... Automorphisms...
AMG		. . Holomorphisms... Holonomy...
AMJ		. . Homology... Homotopy...
		<i>Properties</i>
AMN		. <i>Derived from earlier facets</i>
		* When property per se is signified.
		* DO NOT use as specifiers - take latter direct from originating facet (e.g. Classical from Methods, Divisible from Operations)
3D		. . Axiomatic... Constructive...
7D		. . Constructability... Divisibility...
		. <i>General special</i>
AMO		. . Abstract... Normal... Simple... Complex...
AMY		. . Rational... Real...
		. <i>By sign</i>
AN4 J		. . Positive, Non-positive, Negative...
		. <i>By value</i>
Q		. . Absolute value... Conditional...
		. <i>By dimension</i>
AN5		. . Measure... One-dimensional, singular...
AN8 H		. . Higher-dimensional, n-dimensional...
		. <i>By number of terms</i>
V		. . Monomial, Binomial
AN9		. . Polynomial...
		. <i>By degree of terms</i>
ANA		. . Linear, first order... Non-linear...
ANC		. . Quadratic... Higher order...
		. <i>By number of variables</i>
AND K		. . One variable, Binary...
		. <i>By degree of variables</i>
P		. . Bilinear... Multilinear...
		. <i>By nature of variables</i>
T		. . Mixed... Complex... Real variables
		. <i>By range of applicability</i>
ANF		. . Local... P-adic... Universal...
		. <i>By level of finiteness</i>
ANJ		. . Finite...
ANK		. . Infinite... Infinitesimal...
		. <i>Compositional, etc</i>
ANL N		. . Strong... Closed... Smooth... Regular...
ANO G		. . Homogeneous...
J		. . Symmetric... Ordered... Compact... Free...

Mathematics	AM	Properties
		. Compositional, etc
		. . Symmetric... Ordered... Compact... Free... ANO J
ANT N		. . Complete... Perfect... Continuous... Dual...
ANX F		. . Periodic...
		. <i>By performance</i>
T		. . Qualitative... Optimal... Maximal... Fuzzy...
AO2 N		. . Covariant... Solvable... Summable...
AO5		. . Nilpotent... Idempotent...
		. <i>By fundamental laws</i>
AO7		. . Associative... Commutative...
		. <i>Spatial properties</i>
AOB		. . Proximity... Inner... Convex... Biaxial...
AOG		. . Asymptotic...
		. <i>Properties of space</i>
AOI		. . Euclidean... Affine... Conformal...
AOP		. . Symplectic...
		. <i>Properties of motion</i>
AOQ R		. . Rate... Dynamic... Kinematic...
		. <i>Derived from geometric figures</i>
AOT		. . Plane... Orthogonal... Parabolic...
AP2		. <i>By named mathematician</i>
		. <i>Properties derived from later facets</i>
		* Note preceding AMN 3D above applies here also.
AP5 L		. . Difference... Residual... Scalar...
AP6 N		. . Spectral... Sequential...
AP8		. <i>Properties by other characteristics</i>
		<i>Parts of mathematical structures or systems</i>
APA		. <i>Elements, components</i>
		. . <i>Involved in mapping, function, operation</i>
APC		. . . Domain, Range... Boundary...
		. . <i>Resulting from mapping, function, operation</i>
APG		. . . Solutions... Limits... Classes... Products...
APP		. . . Quotients...
APQ		. . . Residues... Factors... Primes...
APU		. . . Derivatives... Integrals...
		. . <i>Resulting from other operations, processes etc</i>
APX 9D		. . . Derivations... Endomorphisms...
		. . <i>Reflecting structure</i>
APY		. . . Structures... Extrema... Conditions...
AQ6		. . . Chain conditions...
		. . <i>Reflecting space</i>
AQB		. . . Points... Singular points, singularities...
AQD Y		. . . Projectives...
		. <i>Entities</i>
		. . <i>By dimension</i>
AQE		. . . Scalars... Eigenvalues... Vectors...
		. . <i>By form</i>
AQJ K		. . . Character... Polynomials... Continua...
AQM		. . . Spectra...
AQO		. . . Sequences & series
		. . <i>By performance</i>
AQS		. . . Invariants... Variables...
AQU		. . Operators, linear operators
Y		. . . Identities... Functors...

Mathematics ^{AM}
 Parts of mathematical structures or systems
 . Entities
 . . Operators ^{AQU}
 . . . Identities... Functors... ^{AQU Y}

AQW . . Bases... Moduli...
 . *Subsystems*
 * Occur only as subclasses of something else. Introduced by -F in Auxiliary Schedule AM1 & divided like AR/AW
 . *Parts special to a context*
 * Occur only as subclasses of something else. Introduced by -G in Auxiliary Schedule AM1 (e.g. at ARI GC).

Branches of mathematics, 'disciplines', systems
 * All branches & systems (and their parts) are divided in exactly the same way to give a consistent and predictable pattern. This is done by 'retroactive synthesis' ('bringing down' all preceding facets) using the notation provided in Auxiliary Schedule AM1.
 * The arrangement under any system is as follows:
 * . (Forms of mathematical presentation)
 * . (Methodologies)
 * . (Operations)
 * . (Processes)
 * . (Relations)
 * . (Properties)
 * . (Elements & Entities)
 * . (Subsystems)
 * . (Parts or subsystems special to the context)
 * . (Types)
 * .. (Specified by previous facets, AM/AQ)
 * .. (Specified by branches or systems, AR/AW)
 * .. (Special to the class divided)
 * ... * Enumerated under the class concerned.
 * Many subclasses obtained by synthesis are shown below, beginning at ARL I2, where ARL is divided like AM6 (Methods). Normal synthesis using the uninterrupted sequence of 2/9, A/W in Auxiliary Schedule AM1 is sometimes interrupted in order to get shorter classmarks for much-divided classes. All such occasions are noted below for the convenience of the indexer, with a note as to where normal synthesis is resumed.
 * Note that the exact order of subclasses given by normal synthesis, as well as its full potential for detailed subdivision is ALWAYS MAINTAINED.
 * A good example of this arrangement occurs under AW Analysis below.

ARA . Mathematical structures (general)
 ARB . SETS
 . . *Subsystems*
 X . . . Boolean algebra
 * Normal synthesis interrupted; resumes at ARC A.

ARC A . . *Other subsystems*
 . . *Types*
 X . . . Subsets

ARD . COMBINATORICS
 . . *Special structures*

ARE C . . . Combinations & permutations...
 ARF . . . Designs & configurations...

Mathematics ^{AM}
 COMBINATORICS ^{ARD}
 . . Designs & configurations... ^{ARF}

ARG . . Graphs & maps, graph theory...
 ARI ARITHMETIC
 . *Special parts*
 GC . . Numbers... Numeration systems: binary... decimal...
 . *Types*
 QX . . Modular arithmetic

ARJ NUMBER THEORY
 . *Subsystems*
 X . . Geometry of numbers
 * Normal synthesis interrupted; resumes at ARJ Y.
 Y . *Other subsystems*

ARK B . . Number systems:
 * Normal synthesis interrupted; resumes at ARK Y.
 F . . . Integers... Prime numbers...
 O . . . Transcendental numbers
 Q . . . Complex numbers..., Number fields...
 Y . *Types*
 YI . . *By method*
 * Normal synthesis interrupted; resumes at ARO Y.

ARL 2 . . . Elementary number theory...
 JJ . . . Additive number theory...
 N2 . . . Diophantine methods

ARM . . . Algebraic number theory
 * Normal synthesis interrupted; resumes at ARN Y.
 *Subsystems*

ARN Fields in algebraic number theory
 * Normal synthesis is interrupted; resumes at ARN X.
 X *Other subsystems & systems*
 Y . . *Types of number theory by other methods*

ARO . . . Analytic number theory
 * Normal synthesis is interrupted; the array (Types by systems) is concluded at ARO Y.
 X . . . Probabilistic number theory
 Y . . *Other types of number theory*

ARQ B ORDERED STRUCTURES
 D . Ordered spaces... Semilattices...
 ARR . Lattices...
 X . Partially ordered systems

ARS ALGEBRA
 * Regarded primarily as a method.
 . *Types by method*

ART . . Elementary algebra
 * Normal synthesis interrupted; resumes at ART Y.
 Y . *By other methods*

ARU . . Homological algebra
 * Normal synthesis interrupted; resumes at ARW J.

ARV K . . . Cohomology..., K-theory...
 L . . . Homotopy...
 . *By other methods*

ARW J . . Differential algebra..., Difference algebra

Mathematics ^{AM}
 ALGEBRA ^{ARS}
 . . . Differential algebra... ^{ARW J}

ARX ALGEBRAIC SYSTEMS & STRUCTURES
 ARY . Semigroups
 ASA . Groups
 . . . *Subsystems*
 ASB . . . Subgroups
 * Normal synthesis interrupted; resumes at ASC.
 ASC . . . *Types*
 ASD . . . Finite groups
 * Normal synthesis interrupted; resumes at ASE.
 ASE . . . *Other types*
 ASF . . . Commutative groups, Abelian groups
 * Normal synthesis interrupted; resumes at ASG
 ASG . . . *Other types*
 ASH . . . Topological groups
 * Normal synthesis interrupted; resumes at ASI
 ASI . . . *Other types*
 Y . . . Pseudogroups
 *Types*
 ASJ Lie groups, continuous pseudogroups
 * Normal synthesis interrupted; resumes at ASK Y.
 *Types*
 ASK Lie transformation groups
 * Normal synthesis interrupted; resumes at ASK X.
 X *Other types of Lie groups*
 Y *Other types of pseudogroups*
 ASL G . . . Groupoids... Quasi-groups... Loops
 ASM . Rings
 . . . *Types*
 ASN . . . Associative rings
 * Normal synthesis interrupted; resumes at ASR.
 ASO . . . Non-associative rings
 ASP . . . Commutative rings...
 ASQ . . . Non-commutative rings
 ASR . . . *Other types*
 ASS . . . Ideals... Modules... Orders
 ASU S . Semi-fields
 ASV . Fields
 . . . *Special types*
 ASW . . . Skew fields
 ASX . Categories... Vector spaces
 ATA . Algebras, linear algebras
 . . . *Types*
 MV . . . Semi-simple algebras...
 NI . . . Universal algebras...
 O7 . . . Associative algebras
 ATB . . . Matrix algebras, matrices
 ATC . . . Lie algebras... Jordan algebras...

Mathematics ^{AM}
 ALGEBRAIC SYSTEMS & STRUCTURES ^{ARX}
 . Algebras ^{ATA}
 . . . Lie algebras... Jordan algebras... ^{ATC}

ATG . Algebraic geometry
 * Alternative (not recommended) is at AUI TG.
 . . . *Types*
 *By algebraic structure*
 Y Algebraic semi-groups
 * Normal synthesis interrupted; resumes at ATI.
 ATH Algebraic groups
 ATI *Other algebraic structures*
 ATJ *By geometric structure*
 UU Algebraic curves...
 VS Algebraic surfaces...
 ATK EN . . . Families..., Fibrations...
 ATL . . . Varieties, algebraic varieties
 *Types*
 ATM Abelian varieties & schemes
 * Normal synthesis interrupted; resumes at ATN.
 ATN *Other types*
 ATO B Subvarieties... Intersections...
 ATP Cycles & subschemes...
 ATQ . . . Ground fields... Injectives...
 ATS GEOMETRY
 G . *Special subsystems*
 * Normal synthesis interrupted; Types of geometry begin at AUH Y, application of Auxiliary Schedule AM1 resumes at AUL.
 ATT . . Geometric structures & figures, geometric objects
 *By dimension*
 ATU E Points... Lines... Curves
 ATV B Planes... Polygons... Conic sections...
 S Surfaces...
 ATW B Solids, bodies... Polyhedra...
 ATX Four-dimensional, n-dimensional structures
 ATY C Complexes... Polytopes...
 V Neighbourhoods
 AUA Spaces
 AUB F Subspaces
 H *By other characteristics*
 NLH Infinitesimal structures...
 OCT Concave structures...
 AUC Convex structures
 * Normal synthesis interrupted; resumes at AUD OE.
 AUD OE *By other characteristics*
 AUE G G-structures
 *Associations of structures*
 J Configurations... Families...
 P Bundles... Sheaves...
 AUF B Fibres... Nets & webs...
 Q Knots & links...
 AUG Manifolds... Submanifolds...
 AUH S Spectral sequences
 . *Types of geometry*

Geometries

Mathematics ^{AM}
GEOMETRY ^{ATS}
 Types of geometry

AUH Y **Geometries**
 . *By method*

AUI 2 . . Elementary geometry
 4 . . Classical, Euclidean geometry
 6 . . Descriptive geometry
 TG . . Algebraic geometry
 * Alternative (not recommended) to ATG.

AUJ . . Analytic geometry
 * Normal synthesis interrupted; resumes at AUL.

AUL . *By other methods, operations*

AUM . . Differential geometry
 * Normal synthesis interrupted; resumes at AUW.
 . . . *Subsystems*

AUN Spaces
 * Normal synthesis interrupted; resumes at AUO.

OI Euclidean spaces..., Non-Euclidean spaces...
 OM Conformal spaces..., Symplectic spaces...

AUO . . . *Other subsystems*
 G Manifolds
 *By operation*

AUP Differentiable manifolds
 * Normal synthesis interrupted; resumes at AUT.
 *Subsystems*

FUA Spaces, Manifolds by underlying spaces
 *By method*

AUQ Classical spaces
 * Normal synthesis interrupted; resumes at AUR I5 and AUS.

OQB Riemannians spaces...

AUR I5 *By other methods, operators, etc*
 NOG Homogeneous spaces

AUS *Other subsystems*
 EG G-structures..., Fibre spaces...
 X *Types of differentiable manifolds*

AUT *Manifolds by other operations, etc*

AUU With complex structures...
 * Normal synthesis interrupted; resumes at AUU X.

X *Manifolds by other characteristics*
 Y *Other subsystems in differential geometry*

AUV *Types of differential geometry*
 NF Local differential geometry...
 NI Global...

AUW . *Geometries by other operations, etc*

AUX . . Projective geometries
 * Normal synthesis interrupted; resumes at AUJ.

JR . . . Differential projective geometry...

Mathematics ^{AM}
GEOMETRY ^{ATS}
 . . Geometries by other operations, etc ^{AUW}
 Differential projective geometry... ^{AUX JR}

AUY . . *By other relations, etc*

NA . . . Linear geometry
 *Types*

AVA Linear incidence geometry
 * Normal synthesis interrupted; resumes at AVA X.

X *Other types*

AVB . . *By other properties*

NJ . . . Finite geometry...

OJ . . . Non-Euclidean geometry...

AVC . . . Affine geometry
 * Normal synthesis interrupted; resumes at AVD.

AVD . . *By other properties, etc*

ON . . . Metric geometry..., Symplectic geometry...
 OS . . . Kinematic geometry...
 . . *By angles*

AVE . . . Trigonometry
 * Normal synthesis interrupted; resumes at AVE Y.

Y . . *Geometries by other systems*

AVJ **TOPOLOGY**
 . *Subsystems*

AVK . . Spaces, topology of spaces
 * Normal synthesis interrupted; resumes at AVO.
 . . . *Types*

ON Metric spaces... topological spaces...

AVL Analytic spaces
 * Normal synthesis interrupted; resumes at AVN WX.
 *Types of analytic spaces*

AVM Complex spaces
 * Normal synthesis interrupted; resumes at AVN.

AVN *Types by other characteristics*
 *Other types of spaces in topology*

WX Probabilistic spaces

AVO . *Other topological subsystems*
 ES . . Sheaves...
 G . . Manifolds...

AVP . *Types, Topologies*

AVQ . . Algebraic topology, analysis situ
 * Normal synthesis interrupted; resumes at AVU.
 . . . *Subsystems*

AVR Groups in algebraic topology
 * Normal synthesis interrupted; resumes at AVR Y.

Y . . . *Other subsystems*

YSX Categories...

AVS Spaces
 * Normal synthesis interrupted; resumes at AVT.

AVT . . . *Other subsystems*
 UFC Fibre spaces..., Fibre bundles...
 X . . . *Types of algebraic topology*

Mathematics ^{AM}

 TOPOLOGY ^{AVJ}

 . Types, Topologies ^{AVP}

 . . . Types of algebraic topology ^{AVT X}

AVU . . . *Other types of topologies*

 YJR . . . Differential topology

 . . . *Subsystems*

AVV Manifolds

 * Normal synthesis interrupted; resumes at AVW.

AVW *Other subsystems*

 X *Types of differential topology*

AVX . . . *Other types of topologies*

 N6 . . . Low-dimension topology...

AW ANALYSIS

 . *Methods*

AW6 X . . . Calculus... Calculus of variations...

AW7 2 Differential calculus... Integral calculus...

 . *Operations*

 R . . . Differentiation..., Integration...

 . *Relations*

AW8 L . . . Functions

 . . . *Types*

 LIW Analytic functions

 LIW U Systems of functions... Quasi-analytic functions...

 LJS Differentiable functions...

 N3 Real functions...

AW9 Functions of a complex variable

 * Normal synthesis interrupted; resumes at AWD.

AWA G *Other types*

 XG Almost periodic functions...

AWB Harmonic functions, potential functions

 * Normal synthesis interrupted; resumes at AWD.

AWD *Other types of functions*

 XE Special functions

 XFB Beta functions... Gamma functions...

 XX . . . Functionals..., Determinants...

AWE . . . *Other relations in analysis*

 4 . . . Transforms

 L . . . Equations

 . . . *Types*

 ME Differential equations

AWF Ordinary differential equations

 * Normal synthesis interrupted; resumes at AWI (for equations) & AWJ (for relations).

AWG Partial differential equations

AWH Integral equations

AWI *Other types of equations*

 PL Difference equations...

AWJ . . . *Other relations, properties, etc*

 9N . . . Inequalities...

AWK . . . Optimality, optimization

 * Normal synthesis interrupted; resumes at AWL.

Mathematics ^{AM}

 ANALYSIS ^{AW}

 . Other relations, properties, etc ^{AWJ}

 . . . Optimality ^{AWK}

AWK 6Y . . . Control theory, optimal control

AWL . . . *Other properties, elements, etc. in analysis*

 EO . . . Sequences & series

 EP Sequences, progressions

 EQ Series

 EQP 2 Fourier series..., Power series...

 ER . . . Approximations, expansions

 EU . . . Operators

AWM Linear operators

 * Normal synthesis interrupted; resumes at AWM X.

 *Types*

 MP Concrete operators...

 N7 Single linear operator...

 X *Other types of operators*

 Y . . . *Other entities in analysis*

AWN . . . *Subsystems in analysis*

 Y . . . *Types of analysis*

AWO . . . Functional analysis

 * Normal synthesis interrupted; resumes AWR Y.

 . . . *Subsystems*

 FTA Algebras..., Banach algebras...

 FUA Spaces

 *Types*

 FUA VJ Topological spaces

 *Types*

AWP Topological linear spaces

 * Normal synthesis interrupted; resumes at AWP Y.

 Y *Other types of topological spaces*

AWQ A *Other types of spaces*

 B *Other subsystems in functional analysis*

 H *Types of functional analysis*

AWR Non-linear functional analysis

 * Normal synthesis interrupted; resumes at AWR X.

 X *Other types of functional analysis*

 Y . . . *Other types of analysis*

 YN5 . . . Measure theory

AWS . . . Harmonic analysis, spectral analysis

 * Normal synthesis interrupted; resumes at AWS Y.

 MO . . . Abstract harmonic analysis...

 Y . . . *Other types of analysis*

AWT . . . Fourier analysis

 * Normal synthesis interrupted; resumes at AWT Y

 Y . . . *Other types of analysis*

AWX PROBABILITY

 * Most of the literature is on statistical probability; see AX.

 . *Special properties*

 D8L . . . Dependence... Evidence... Chance...

Mathematics AM
. . . . Dependence... Evidence... Chance... AWX D8L

AWY APPLIED MATHEMATICS

- * Alternative (not recommended) to subordinating to the subject to which applied.
- * Add to AWY numbers 4/9 & letters A/Z from the whole classification; e.g. AWY B Mathematics of physics.

APPLIED MATHEMATICS AWY

Outline of Statistics and Probability

- * This is an inverted schedule. Compound classes are formed by citing first the component which comes latest in the schedule. For example, significance tests in general are at AXF and variance in general is at AXT; so significance tests of variance goes under variance (at AXT F) & not under significance tests.
- * _____

AX STATISTICS & PROBABILITY

AX2 . *Common subdivisions*

7 . . History

. *Agents*

M . . Data processing & computers

AX3 4 . *Forms of mathematical presentation*

- * This position is used only when qualifying AX5/AX6 Descriptive statistics.

5 . . Errors

A . . Theory, General theory of statistics & probability

AX5 . DESCRIPTIVE STATISTICS

7 . . Collection of data

77 . . . Survey design

8 . . Presentation of data

9 . . Descriptive measures

AX6 . . . Frequency distributions

7 Population characteristics & parameters

9 Central tendency, averages

J Variability... Dispersion...

L Deviation... Range...

AX7 . MATHEMATICAL STATISTICS

- * Divided like Mathematics, using Auxiliary Schedule AM1.

34 . . *Forms of mathematical presentation*

3M . . *Methodologies & methods*

4P . . *Operations & Processes*

8J . . *Relations*

AN . . *Properties*

DA . . *Elements & Entities*

F . . *Subsystems*

R . . *Systems, branches of mathematics*

RS . . . Algebra

TS . . . Geometry

VJ . . . Topology

W . . . Analysis & calculus

WX . . . *Probability*

- * See AXG

X . . Bayesian statistics

AX8 . . STATISTICAL METHOD

. . . *Operations*

D Analysis (general)

- * For design & analysis of experiments, see AXQ R.

S Measurement

ST Validity & reliability

UC Scaling, scales

STATISTICS & PROBABILITY AX
 MATHEMATICAL STATISTICS AX7
 . . . Operations
 Measurement AX8 S
 Scaling AX8 UC

AX9 D *Operations special to a context*
 * For example, AXR 9L Weighting (in Design of experiments).

AXA . . . *Properties*
 B . . . Errors... Dependence & independence...
 Q . . . Bias... Risk...

AXB B . . . Expectation
 D . . . Degrees of freedom
 G . . . *Properties special to a context*
 * For example, AXI BL Homogeneity (in Probability distributions).

AXC D . . Parametric methods (general)
 F . . Non-parametric methods (general)
 J . . Decision making
 N . . Inference

AXD . . . Estimation, parameter estimation
 J Point estimation... Maximum likelihood...

AXE Interval estimation, confidence intervals

AXF . . . Tests of significance, hypothesis testing
 U . . . *Types of inference*
 Y Probability (general)
 * Alternative (not recommended) to keeping separately in mathematics (at AWX).

AXG STATISTICAL PROBABILITY
 7 . Mathematics
 H . Variables
 T . Conditional probability

AXH . Random variables
 . . *Properties*
 BB . . . Expectation

AXI . . Probability distributions, statistical distributions
 . . . *Properties*
 BK Statistical dispersion...
 BP Moments...
 BX Density function
 . . . *Types*
 AXJ K Discrete distributions (general)
 O Continuous distributions (general)

AXK Univariate distributions
 JK Discrete
 K Binomial... Poisson...
 O Continuous
 P Normal... Chi-square...

AXL Multivariate distributions

AXM Limit distributions, limiting

AXN . . STOCHASTIC PROCESSES
 7 . . . Mathematics
 7W . . . Stochastic analysis
 8S . . . Measurement
 . . . *Special elements*
 O Time... Sample path...
 S Stochastic dynamical systems

STATISTICS & PROBABILITY AX
 . STATISTICAL PROBABILITY AXG
 . . . STOCHASTIC PROCESSES AXN
 Special elements
 Stochastic dynamical systems AXN S

AXN U Networks
 *Types*
 W Ergodic processes

AXO Markov processes
 Q Markov chains
 R Birth & death processes
 V Branching processes

AXP D Diffusion processes
 S Stationary processes
 V Martingales
 . . . *Special probabilistic phenomena*
 X Games theory... Queuing... Renewal...

AXQ G Inventory...
 R . STATISTICAL MODELS
 . DESIGN & ANALYSIS OF EXPERIMENTS

AXR . . Design of experiments, statistical design
 . . . *Operations*
 9D Randomization...
 9M Replication...
 9N Confounding...
 9Q Combining tests... Comparison tests...
 . . . *Types of designs*
 SE Experimental groups... Comparative designs...

AXS . . Analysis of experiments, statistical analysis
 S . . . Multivariate analysis

AXT . . . Variance, analysis of variance
 V Covariance

AXU C . . . Correlation & regression
 E Correlation
 N Regression
 Y . . Series design & analysis

AXV . . . Time series
 VN Stationary series... Forecasting...

AXW . . Sampling theory, random sampling theory
 I . . . Sampling distributions
 . . . *Types of sampling*
 AXX B Simple... Stratified... Cluster...
 H Sequential sampling, sequential analysis
 X . . Monte Carlo methods

AXY APPLIED STATISTICS
 * Alternative (not recommended) to subordinating to subject wo which applied.
 * Add to AXY numbers 4/9 & letters A/Z from the whole classification; e.g. Operations research AXY TQS.