Appendix 3 Miscellany

abscissa of regularity absorbing set absorptance vs. absorptivity absorption edge Achilles and Tortoise acoustic inertance activity analysis acute angle ad hoc addendum or note added in proof adeles and ideles adjacement matrix adjoint Hilbert space aerial array a fortiori agent of type 1 aggregate endowment aliases All-America [adj.] vs. All-American [n.] all but a finite number all its derivatives alloy vs. blending alternating group of degree naltogether vs. in the altogether amalgam vs. mixture amenable group ample bundle analog and analogy analog simulation analytic set analytically thin set

antsatz of a solution apertures and stops apogee and perigee a posteriori distribution approximate identity in an algebra a priori estimate Archimedean unit arcwise connected space Argand diagram Artian module ascending chain condition asymptotic expansion/behavior and asymptote at high temperature/ constant pressure at most finitely many k's at stages/moments vs. in places/steps; on sides/hands at this juncture atled autocephalous and autonomous churches autoregressive process avalanche breakdown backward and forward differences balayage principle ball with center x and radius rband of a K-space bang-bang principle

bar-theorem

barrel barycentric refinement base for a neighborhood system/of a cylinder basic solution basis for a Banach space Bayesian approach Bhagavat Gita bidiagonal, tridigonal vs. two-diagonal, three-diagonal bifurcation set bigoted opinions of ε - δ -ism binumeration Biot and Savar's law bipolar relative to a pairing **Boolean** functions Boolean-valued analysis bordered surface bornivorous sequence bound variable boundary of a manifold bounded/limited/restricted quantifier box-product topology bra-vector bracket product braid group branch and bound methods branched minimal surface branching process bremsstrahlung Brobdingnag and Lilliput bubbly slug flow buckling factor budget constraint bulk viscosity bundle of homomorphisms burn-out crisis

by dint of \mathscr{A} by force of \mathscr{A} by means of \mathscr{A} by order of \mathscr{A} by reason of \mathscr{A} by the aid of \mathscr{A} by way of \mathscr{A} by/with the help of \mathscr{A} canonical projection cap product capacitable set capacitatory mass distribution capacity capillary wave caps and faces carte blanche Cartesian coordinates/product casual vs. causal casus irreducibilis catastrophe theory categories admitting limits celestial mechanics cellular cohomology theory center of gravity/of a group/ of a pencil of hyperplanes chain rule change-of-variable formula Charles's or Gay–Lussac's law Chebyshev Equioscillation Theorem Chinese Remainder Theorem choice function chunk of a set circular annulus of width acircumcision clan Clebsh-Gordan expansion clopen set

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closed-loop and open-loop closedness closeness of a packing closure cluster point cnoidal and solitary waves code for \mathscr{A} co-echelon space coarser filter cobordism and concordance coercive operator cognoscibility of the world collectionwise Hausdorff space combing a braid commodity-price duality compact-open topology compatible with operations compendious exposition complanar vector complementary set complemented subspace complete integrability/solution completion of a uniform space composite function compound Poisson process compressible fluid concircularly flat space conditional solution/mean conditionally complete lattice confidence/fiducial interval conformality vs. conformity conjugate space/operator connection connectives conservation of mass and energy constant width constraint qualification constructible set

constructive ordinals consumption bundle context and contents contour of integration contraction principle contracting or nonexpansive mapping controls convergence in measure/ in pth mean converse class/theorem conversion of mankind convex hull coordinates with respect to a basis corona problem correction factor to a coefficient correlogram coset map/canonical projection Coulomb force countable model counting function Cramer rule Cramér–Rao inequality credo, creed, and credendum crisp set vs. fuzzy set Critique of Pure Reason crookedness of a knot cross product/section cubic close packing cul-de-sac cup product current algebra curriculum vitae curve of pursuit cushioned refinement cusp singularity cut and glue method

cutoff cutset cycle index cyclic vector cyclide of Dupin cycloid damping ratio dashing principle data analysis/encryption Decalog or the Ten Commandments deep water wave defect of a meromorphic function deficiency index of an operator definiendum et definiens defining relations definite quadratic form degeneracy index degenerate kernel degree of a mapping/of an algebraic variety/of recursive unsolvability/of ramification of a branch point delay-differential equation deleted space denumerable set derivation tree derivatives and primitive functions derived function descents and ascents desideratum determined system developable space dew point dextral and sinistral diagrammatic representation

dictum de omni difference-differential equation difficulties in formulation diffraction grating Diophantine equations direct product directed family disk algebra dissection and valuations distance between x and ydistinct elements ditto diurnal aberration divergent double series dogma, doctrine, and tenet dominant integral form Dominated Ergodic Theorem dormant idea double sequence dual space duality between X and X'dummy index duo-trio test Dupin indicatrix duxial set écart eddy current/velocity Edge-of-the-Wedge Theorem efficiency, effectiveness, and efficacy efficiency frontier eigenvalue Einstein summation convention elemental truths and elementary particles ellipse ellipsis ellipsoid of revolution

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embedding and immersion empty set energy integral entourage entries, members, components, or terms of a sequence entry of/in a matrix enumeration of a code enveloping von Neumann algebra epigraph Epiphany, Easter, and Whitsun Epstein zeta function equalizer equally-spaced points equations in operators for xequilateral, isosceles, and right triangles equilibrium state Eratosphenes sieve Erlangen program $\operatorname{errat}\operatorname{um}$ error detecting/estimate Escher tile et alia/et al. et alii/et al. et cetera/etc. etale extension and Henselization Euclid axiom Euclidean algorithm Euler characteristic ex falso quod libet exave excess demand exchange economy exegetics exempli gratia existence theorem existential quantifier

exit time exotic sphere expansion as $t \to \infty$ of fexpansion of a vector in a basis expansive vs. expensive explanandum et explanans expose extended real axis extension by 0 of f to Xextension to/onto all/the whole of Xexterior product of differential forms external law of composition extremal quasiconformal mapping extreme point faces of alcoves factor group failure of approximation faithful linear representation fallacy of ratiocination fan shape fast breeder reactor/Fourier transform feasible solution fiber bundle vs. foliation fibered manifold fibration fictitious state fidelity criterion fiducial distribution filter on/over a set fine topology finer filter finite-valued function finitistic credenda first splitting time

fixation on idioms fixed-point-free mapping fixed-point theorem flabby sheaf flag manifold flat *A*-module floating point flows in networks flux density fold, cusp, swallow-tail, butterfly, and umbilic for lack of \mathscr{A} for the purpose of \mathscr{A} forcefull argument and forcible entrv fractal frame of a bundle Fredholm alternative free group/lattice on/with mgenerators Freiheitssatz Frenet frame Froude number fully normal space functionally-distinguishable points functions periodic in x/of the same period $\pi/$ with/of compact support fuzzy set Gauss forward interpolation formula Gauss integral Gaussian curvature general solution generic property genus of a variety germ of an analytic function

ghosts of departed quantities gluons goodness-of-fit graded module grazing ray great circle (of a sphere) halting time handlebodies and surgery Hauptsatz Hauptvermutung hazard rate heads and tails Heisenberg uncertainty relation Henselian rings Hermitian operator Hilbert Nullstellensatz Hilbertian seminorm hidden variables hierarchy high-precision computation hitting time hold almost everywhere holohedry holomorphic hull holonomy horned sphere hull-kernel topology hyperbolas and hyperbole hypercritical and hypocritical hypograph id est ideas behind the proof ignorabimus ill-conditioned matrix ill-posed problem imbroglio, quandary, and predicament

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immersion impervious to perturbation Implicit Function Theorem in a solid state in accordance with \mathscr{A} in addition to \mathscr{A} in agreement with \mathscr{A} in answer to \mathscr{A} in briefer words vs. lengthily in case of \mathscr{A} in cause of \mathscr{A} in combination with \mathscr{A} in compliance with \mathscr{A} in conformity with \mathscr{A} in conjugation with \mathscr{A} in connection with ${\mathscr A}$ in consequence of \mathscr{A} in consideration of \mathscr{A} in contrast to/with \mathscr{A} in contradistinction to \mathscr{A} in default of \mathscr{A} in essence in exchange for \mathscr{A} in favor of \mathscr{A} in honor of \mathscr{A} in juxtaposition with \mathscr{A} in line with \mathscr{A} in memory of \mathscr{A} in need of \mathscr{A} in place of \mathscr{A} in preparation of \mathscr{A} in proposition to \mathscr{A} in quest of \mathscr{A} in recognition of \mathscr{A} in regard to \mathscr{A} in relation to \mathscr{A} in respect to \mathscr{A} in response to \mathscr{A}

in return to/for \mathscr{A} in search of $\mathcal A$ in statu quo and the status quo in such a way that \mathscr{A} holds in support of \mathscr{A} in the course of ${\mathscr A}$ in the case of \mathscr{A} (considering \mathscr{A}) in the event of /that in the form of \mathscr{A} in the main in the matter of ${\mathscr A}$ in this instance/event in this stage of reasoning in token of respect in toto inaccessible cardinal incipient decay incompressible fluid independent increments index librorum phohibitorum indices modulo pinduced topology inductive/induction hypothesis/base inequalities in N variables inertial reference frame inevitable, illuminating, deep, relevant, responsive, and timely mathematics inferior/superior in rank ingoing subspace initial object input-output analysis inradius and outradius inscribed, enscribed, and circumscribed circles instances of general facts integer programming

integrals, intergrands, and integrators interference fringes intertwining operator interval of absolute stability inverse problems inversion formula ipso facto irrefutable formula irreversible process isosceles triangle on base aiterated logarithm law Iwasawa decomposition jet propulsion jets and currents joins and meets joint distribution/spectrum jointly/separately continuous jump at a point jumping to a conclusion juxtaposition and concatenation Kantian antinomies Kegel function kenosis ket-vector Killing form killing time Kleinian group knots and links kurtosis labors of Sisyphus laconic, succinct, terse, or lapidary lagged variables lapsus latent heat Latin square

lattice gauge theorem law of excluded middle layer least-action principle least squares method left-hand side leftmost and rightmost terms legend of a map level sets libertarian vs. libertine Lichtenberg figures life time likelihood ratio test limit in norm/inferior or lower/superior or upper Lissajous' figures lituus local ring locally integrable locking effect locus log-linear analysis lowest common denominator main diagonal maladroit malfunctions manifold without boundary many-valued logic Markov chains Markovian equation mathesis universalis maximal flow, minimal cut meager set mean unbiased estimator Mengerlehre mesh of a covering metric on/for the set Minkowski functionals or gauges minor and major axes

misoneismmodel theory versus fashion business modular law module modulo modulus modus ponens moiré pattern mollifiers, truncators, and regularizations moment of momentum moment problem momentum phase space monad monotone operator monotonic function Mössbauer effect multi-index multigrid methods multilinear form/profit multinomial logit models mutatis mutandis myopia, impatience, or order continuity *n*-tuple naive set theory \mathbf{nat} Nativity of Christ or Christmas natural moving frame necessity and sufficiency negation negentropy nescience vs. omniscience nested intervals net in a set net premium Newton first law

Newtonian mechanics next Monday vs. the next chapter nexus nodal point noisy channel nolens volens non-Bayesian approach nondimensional conductance nonperturbative phenomena normal form of a singularity normed space notation notations suggestive of Latin origin noughts and crosses or tic tac toe nowhere dense set nozzle valve nth term nuclear space null space nullity of a linear operator numeration numerator and denominator nutation oblate spheroidal coordinates oblique circular cone observability and controllability obstruction class obtuse angle Ockham's/Occam's razor odds and ends oecumenical or general councils on grounds of \mathscr{A} on the basis of \mathscr{A} on the ground of \mathscr{A} on the occasion of ${\mathscr A}$ on the strength of \mathscr{A}

on the whole vs. in particular one-sided surface operator and transformers opus operatorum oracles original sin/the Fall **Origin of Species** orthodoxy vs. heresies orthogonal complement oscillating series osculating plane ossified superstitions of ε - δ -ism outgoing subspace overdetermined system overlapping generations model overspill owing to \mathscr{A} packed beds packing and covering Palais–Smale condition Paley–Wiener Theorem panem et circenses papal infallibility papers by the author parabolas and parables Paradise Lost parallel and semiparallel strips parity transformation partial differentiation/ function/sum partially ordered space particular solution partition of unity subordinate to a covering passage to the limit past cone path integral pattern and speech recognition

payoff function peak function permutations and combinations phase shift pivot planar curvilinear coordinates plane domain plank plates, disks, and membranes pointed topological space Pointwise Ergodic Theorem polynomial in zpolytopes and polyhedra poset posit/postulate \mathscr{A} /take \mathscr{A} for granted power of a with exponent xpredecessors and successors predicate calculus prediction theory predictive distribution preferences in an economy prefix prenex normal form presheaf on a site price for an allocation primary ring/condition prime formula principle of least action/of optimality prodigal son and prodigy professorate vs. professorship prolate spheroidal coordinates proliferation of errors prolongation of a solution/ of a geodesic proof tableau property held jointly by two sets

pull back and push forward pullback of a differential form pure point spectrum purely discontinuous distribution putative foundation of analysis Pythagorean/Pythagoras Theorem quadratic form in several/infinitely many variables quadratic programming/form quadric cone quadrivium quark confinement quermassintegral queuing theory quotient set of X by \sim radioactive waste random sample/variables of mean 0 and variance 1 /walk (by spheres) randomized test range of a mapping/of statistic data rank of a matrix rank-one operator Rankine–Hygoniot relation ranking and selection ratio of the circumference of a circle to its diameter reals, rationals, naturals, and complexes reciprocal equation reciprocity law/of annihilators rectangular parallelepiped rectifiable curve rectilinear complex/propagation

recurrence formulas recurrent point recursive function redshift refutable formula regularity up to the boundary relatively norm compact set relativity relativization remainder and residue remainder in Taylor's formula removable singularity Renaissance render assumptions/conditions/ circumstances renumerate vs. remunerate repair the omission repeated integral replacement replica replication research into the unknown residual spectrum **Residue** Theorem resolution of identity/ of singularities resolvent equation/of a linear operator resource allocation restatement of a claim restricted holonomy group résumé retail and wholesale revealed preference relation Revelation of St. John the Divine, the Apocalypse reverse order reversed process

review vs. revue right angle right-hand side rigid body rigidity theorem robust estimation roentgen or röntgen rolling without slipping rooms and passages root subspace roots of unity rotation of $\mathscr{A}/by/through \pi/2$ about the axis xroundoff error routine considerations Rybáiyát of Omar Khayyám ruin probability rule of inference ruled surface ruler and compass saddle/jump/saltation point sampling distribution satisfaction and gratification scalar product scale parameter scaling method/factor scattered set schism schlieren method scholar of the highest/middling attainments Schwarschild radius Scientia scientiarium scratch hardness screw dislocation/motion Second coming secondary diagonal Selberg sieve

selection rule/function sense-preserving map separable space separated uniform space separation theorem/axioms sequential decision rule sequentially compact space series-parallel connection Sermon on the Mount serving, full, or pure subgroup sesquilinear form set furnished with a metric set-theoretic stance shallow water wave share set sharp estimate sheaf associated with a presheaf sheaf of germs of smooth functions shear stress sheets of a hyperboloid vs. nappes of a cone shift operator shock wave short exact sequence shunt side effects/conditions sieve method sign test signed measure simplex tableau simulation and numerical modeling sine qua non singleton skew product/field skimming the surface skin-friction drag

slack variable slant product slender body theory slice sliding vector slit domain slot vs. slits small sample smashing/collapsing/shrinking a space to a point smoothness required of a (boundaryless) manifold socle of a module Soddy and Fajans' rule solid body solubility solution operator/ by quadrature/to equations/ in integers solvability solving a triangle source coding theory space of strain and stress span of a set specified heat capacity sphere geometry spherical geometry spinspin quantum number spinor group spline interpolation square of side astance vs. stanza steam point stiffness ratio stopping rule straight angle

straightforward and tedious computations strange attractor stress stretched string strict implication/morphism strictly convex function strings and superstrings strong convergence/dual space strongly elliptic operator/exposed point/inaccessible cardinal structure carried by a set subnet subnexus sum of a series summable by Abel's method supplementary angle surd surface energy/tension surgery obstructions survey vs. review and revue survival of the fittest sweeping-out process symmetry breaking synchronous clocks synergism system of notations for ordinals systems analysis/theory syzygy theory tail filter taking limits, by passage to the limit, or by a limiting argument tally with, agree with, and correspond to tautochrone tautology

tempered distribution term in predicate logic/ of a language/of a series tertium non datur tessellations and tilings test function the last term (in a (finite) series) vs. the latest news theorem of coding theorem of Tauberian type Theorema Egregium theory of errors thermocouple theta function thick-film and thin-film circuits thickness of an oval three-body problem threshold Jacobi method tieset tight family of measures tightness time sharing timelike curve to and fro; neither and thither tolerance and confidence regions topology on/for Xtopos torquemeter torsion modules torus totally bounded set trace space transducer vs. trunsductor transfer principle transient Levy process transverse foliation/ mass/vibrations trapezo-rombic dodecahedron

trellis code tribe trivium truncation function/error truth and satisfaction of intellect truth table tuning fork turn-pike theorem twin paradox twisted and skew group rings two-bin system ubiquitous set ultimate boundedness ultimate, penultimate, and antepenultimate ultranet unbiasedness uncertainty principle uncompleted vs. incomplete uncountable set undefined concept underflow underlying space undotted index unfolding unfortunate nomenclature unicity/uniqueness theorem unified field theorem uniformly most powerful test unilateral constraints uniqueness theorem unit ball/cell/cost unity element and unitization universal cover vs. open covering universal quantifier/set unordered pair unsteady flow

up to equivalence/isomorphism upcrossings uranium-lead dating utility allocation vague topology vanishing cycle variational principle varieties of lattices and lattices of varieties vector-valued integral vena contracta vera causa verbatim versal unfolding vertical angles vice versa videlicet vinculum virial expansion virtual arithmetic genus/particle viscositv viscous and inviscid fluids void set voltage drop vying hypotheses waiting time Walrasian equilibrium warped product wasan water-coal slurry wave-particle duality wave propagation/steepness wavelength and wavenumber weak lacuna weak-star topology

weakly compact set web group webbed space well-formed formula well-ordered set well-posed problem whence, hence, and from there wild space winding number with recourse to \mathscr{A} with the aim of \mathscr{A} with the exception of \mathscr{A} with the help of \mathscr{A} /by the aid of \mathscr{A} with the intention of \mathscr{A} with the notation of Chapter 1 with/in reference to \mathscr{A} without loss of generality word for word Wronskian X-ray microscopy xerography Yang–Mills gauge theory yea and nay venri Yukawa potential Zeeman effect Zermelo universe zero-one laws zillion \top , verum \perp , falsum ... ellipsis dots/periods