

Colon Classification:

Facet Formulas

[P]
Personality
Connector (,)

[M]
Matter
Connector (;)

[E]
Energy
Connector (:)

[S]
Space
Connector (.)

[T]
Time
Connector (^)

Main class	Facet formula	Foci with examples
Library Science 2	2 [P] ; [M] : [E] [2P]	<p>[P] Type of library: School, University, National ...</p> <p>[M] Type of material: Book, Periodical, Newspaper, Thesis, Patent ...</p> <p>[E] [2P] Problem: Book selection, Circulation, Administration ...</p>
Medicine L	L [P] : [E] [2P]	<p>[P] Organ / body system: Abdomen, Eye, Respiratory system, Skin ...</p> <p>[E] Problem: Physiology, Disease, Public health and hygiene ...</p> <p>[2P] Cause (for 4 Disease) of [E]: Infection, Parasite, Functional disorder ...</p> <p>[2E][3P] Handling (for 4 Disease) of [E]: Surgery, Radiotherapy, Diet regulation ...</p>
Agriculture J	J [P] : [E] [2P] : [2E]	<p>[P] Plant (utility · part · genus/species): Food, Oil, Leaf, Fruit, Seed, Fabric ...</p> <p>[E] [2P] Problem & Sub-Problem: Disease, Breeding, Harvesting ...</p> <p>[2E][3P] Operation: Collecting, Storing, Threshing, Cleaning ...</p>

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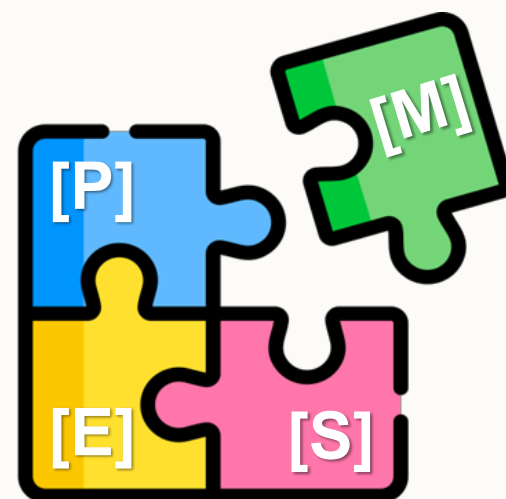
Main class	Facet formula	Foci with examples
History V	V [P], [P2] : [E] [2P] ' [T]	<p>[P] Community/country (by Geographic Device): Asia, India, Europe ...</p> <p>[P2] Part/aspect: Executive, Legislature, Functional body ...</p> <p>[E] Event/problem: Policy, Source, Archives ...</p> <p>[T] Period: Era, Decade, Year ...</p>
Law Z	Z [P], [P2], [P3], [P4]	<p>[P] Community(Geographic Device/Subject Device): Indian Law, Muslim Law...</p> <p>[P2] Law facet I: Legal Person, Property, Contract, Tort ...</p> <p>[P3] Law facet II: Varies based on foci in [P2] ...</p> <p>[P4] Law facet III: Varies based on foci in [P3] ...</p>

Colon Classification: Mathematics

Each canonical class has its own facet formula

- B1 Arithmetic
 - B13 Number Theory **B13[P],[P2]:[E][2P]**
- B2 Algebra
 - B23 Theory of equation **B23[P]:[E]**
 - B25 Higher Algebra **B25[P],[P2]:[E][2P]**
- B3 Analysis
 - B33 Differential equations **B33[P],[P2],[P3]:[E][2P]**
 - B37 Real variable **B37[P]:[E][2P]**
- B6 Geometry **B6[P]:[E][2P]**
- B7 Mechanics **B7[P]:[E][2P]**

Mathematics in CC is divided into canonical classes rather than general characteristics, with each class possessing a distinct facet formula tailored to its logic



Colon Classification: Mathematics

Examples of class numbers within different canonical classes

B13 - Theory of Numbers

B13[P],[P2]:[E][2P]

[P] **Number** - Prime, Highly composite, number defined by partition

[P2] **Theory** - Primality & divisibility, Distribution

[E][2P] **Method** - Algebraic, Congruence, Analytical, Geometrical

Example: Analytical method of distribution of prime numbers. B131,2:3

[P] Prime = B131

[P2] Distribution = 2

[E][2P] Analytical = 3

B23 - Theory of equation

B23[P],[P2]:[E][2P]

[P] **Equation type** - Linear, Quadratic, Cubic, Transcendental

[E] **Problem** - Numerical solution, Formal solution, Graphical

Example: Numerical solution of algebraic equations. B23:1

[P] Algebraic equations = B23

[E] Numerical solution = 1

B6 - Geometry

B6[P]:[E][2P]

[P] **Space** - Line; Plane; Three/Four / Five / n dimensions

[E][2P] **Method** - Enumerative; Algebraic; Differential; Infinitesimal; With vectors

Example: Differential plane geometry

B62:3

[P] Plane in geometry = B62

[E] Differential = 3

B7 - Mechanics

B7[P]:[E][2P]

[P] **Matter** - Solid, Liquid, Rigid body

[E][2P] **Problem** - Inertia, Motion, Vibration

Example: Dynamics of viscous liquids

B756:3

[P] Viscous liquids = B756

[E] Motion/Dynamics = 3

cc:hasPersonality
[P] - Round 1, Level 1

Domain: cc:CompoundSubject
Range: cc:PersonalityFocus

The most concrete isolate - Number
in B13; Space in B6; Matter in B7

cc:hasPersonality2
[P2] - Round 1, Level 2

Domain: cc:CompoundSubject
Range: cc:PersonalityFocus

Second level within Round 1 -
Theory in B13; Degree of equation in
B33

cc:hasPersonality3
[P3] - Round 1, Level 3

Domain: cc:CompoundSubject
Range: cc:PersonalityFocus

Only in B33 (Differential Equations)
- Order of the equation (First,
Second ... nth)

cc:hasEnergy
[E] - Round 1 Energy

Domain: cc:CompoundSubject
Range: cc:EnergyFocus

The operation, method, or problem
- in B13: Method; in B6: Geometric
method; in B33: Problem type

cc:hasSecondRoundPersonality
[2P] - Round 2 Personality

Domain: cc:CompoundSubject
Range: cc:PersonalityFocus

After [E]: appears in B13, B25, B33,
B6 formulas as sub-type or special
case

cc:hasSecondRoundEnergy
[2E] - Round 2 Energy

Domain: cc:CompoundSubject
Range: cc:EnergyFocus

Not used in Mathematics - present
in other domains like Agriculture (J)

Layer 1: Schema

Layer 2: Vocabulary

Layer 3: Subjects

