# **Lean pre-coding sheet — 70/89**

**Component:** fixtures/annex\_b/part\_0/division\_registry.json (Part 0 fixtures)  
 **Version/FormulaID:** Registry content is **data** (not in FID); FID covers rule primitives only.

## **1) Goal & success**

**Goal:** Provide the canonical **DivisionRegistry** for Part 0: a versioned unit tree (plus optional adjacency) with required provenance and baseline fields.

**Success:** Loads and validates; exactly **one root**, **no cycles**; fields present and in-range; determinism preserved via canonical JSON (UTF-8, sorted keys, LF).

## **2) Scope**

**In scope:** id, provenance{source,published\_date}, **Units[]** with locked fields, optional \*\*Adjacency[]`.

**Out of scope:** Options and tallies (separate fixtures), report rendering.

## **3) Inputs → outputs**

**Input artifact:** fixtures/annex\_b/part\_0/division\_registry.json.

**Pipeline output usage:** Appears in **LoadedContext** (Registry, Units, Adjacency) at **LOAD**; then checked at **VALIDATE** before any math.

## **4) Entities/Tables (minimal)**

## **5) Variables (only ones used here)**

## **6) Functions (signatures only)**

N/A (fixture only).

## **7) Algorithm outline (how it’s consumed)**

**LOAD** reads Registry (units+adjacency) into **LoadedContext**.

**VALIDATE** enforces: tree with one root; magnitude≥1; roll/baseline requirements; adjacency type domain; WTA ⇒ magnitude=1.

## **8) State flow (very short)**

Used at **LOAD → VALIDATE**; on success the pipeline proceeds; on failure, run is marked **Invalid** and later stages are skipped per rules.

## **9) Determinism & numeric rules**

**Ordering:** stable orders (Units by **Unit ID**) before any hashing/serialization; JSON canonicalization (UTF-8, sorted keys, LF).

**Counts are integers;** no float equality; presentation rounding occurs in reports, not here.

## **10) Edge cases & failure policy**

Missing or multiple roots; cycles; magnitude<1; negative rolls; population weighting selected but missing/zero baselines; adjacency referencing unknown units or unknown type. Reject at **VALIDATE** with clear errors.

## **11) Test checklist (must pass)**

Schema validates; **hierarchy** and **magnitude** constraints pass; if VM-VAR-030=population\_baseline, all aggregated Units have positive baselines and a year. Determinism is indirect (same input ⇒