## "SYMMETRIES OF ALGEBRAS, VOLUME 1" BY C. WALTON UPDATES AND CORRECTIONS

## Last updated: January 28, 2025

**§1.3.2, page 38.** There should be (more descriptive) names for the morphisms and axioms attached to left *A*-modules. "Action map" should be "left action map", and the two following diagrams should be labelled as "left module associativity" and "left module unitality", respectively. Also, the map  $\triangleleft := \triangleleft_V$  should be called a "right action map".

§1.3.2, page 39. Line 9: "(left) module map"  $\rightarrow$  "a (left) module map"

§1.3.3, page 40. Line 7: the "(*A*, *A*)-bimodule" → "an (*A*, *A*)-bimodule". Line 16: "bimodule map" → "a bimodule map".

§1.4.3i, page 46. Prop. 1.20, line 2: "a  $(A, B_2)$ -bimodule"  $\rightarrow$  "an  $(A, B_2)$ -bimodule".

§2.2.2i, page 82. Lines 2-3: "includes Vec itself; see §1.1.4iv."  $\rightarrow$  "includes Vec itself (see §1.1.4iv), and A-Mod for a k-algebra A."

**§2.4.4, pages 97–99.** A Morita equivalence between (k-)algebras is an equivalence between their *linear* categories of modules. In line -2 of page 97, replace "as categories" with "as linear categories". Add "as linear categories" at the beginning of line 3 in the statement of Theorem 2.18. In lines 2 and -3 of the proof of Theorem 2.18, and in the claim statement, replace "functors" with "linear functors". In lines 5 and 8 of the proof of Theorem 2.18, replace "of categories" with "of linear categories".

**§3.3.1, pages 148.** Add to line 9 (skipping diagram), "Isomorphic *C*-module categories are defined likewise."

§4.9.3, page 258. Line 6: "an algebra A"  $\rightarrow$  "a nonzero algebra A".

§4.14, page 276. In Exercise 4.2(b), replace " $g \triangleright p_{g'} := p_{g'g}$ " with " $g \triangleright p_{g'} := p_{gg'}$ ".

§4.14, page 277. Rephrase Exercise 4.6 as "[...] collection of algebras [...] forms a category (denoted by Alg(C))."

**§4.14, page 286 / Indices**. From Exercise 4.58: Add "invariant subalgebra" to the index of terminology and "*A<sup>G</sup>*" to the index of notation.