This week we'll finish Chapter II by proving Hedberg's Theorem and discussing how to do elementary number theory (§ 11). Then we introduce two new standing assumptions: *function extensionality* (§ 12) and the *univalence axiom* (§ 13). We prove that the latter implies the former.

Exercises

As always, the numbers refer to Rijke's *Introduction to Homotopy Type Theory*.

- Ex. 10.2: The diagonal map and truncation level. Add (d): Conclude that A is a set if and only if δ_A is an embedding.
- Ex. 11.3(c): If A is a retract of B, and B has decidable equality, then so does A.
- (If you're feeling energetic:) Ex. 11.5 (Schröder-Bernstein): Given X and Y sets with decidable equality and embeddings $f : X \to Y$ and $g : Y \to X$, construct an equivalence $X \simeq Y$.
- Ex. 12.4–7: The different ways of saying a map is an equivalence are all equivalent propositions.
- Ex. 12.18: The Π-types are equivalent to the types of sections of first projections.