▶ CHRIS CONIDIS, *The computability of the Artin-Rees Lemma and Krull Intersection Theorem*.
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We will examine the proofs of two related algebraic theorems, namely the Artin-Rees Lemma (AR) and the Krull Intersection Theorem (KIT). These related arguments appear in many Algebra textbooks in which AR is used to prove KIT. First, we will show that AR and KIT each follow from weak König's Lemma (WKL_0). We will then go on to show that, in the context of infinite sequences of rings, the uniform Artin-Rees Lemma (UAR) still follows from WKL_0, but the uniform Krull Intersection Theorem (UKIT) does not.

[1] H. Matsumura, ***Commutative Ring Theory***, Cambridge University Press, 2006.