Classification of topological insulators and superconductors using KR theory ABHISHEK ROY, University of Illinois, Urbana-Champaign — Kitaev's periodic table[1] provided a classification of topological insulators and superconductors. The classes are indexed by dimension and symmetries. We present a method of arriving at the table using KR theory. This gives a unified and systematic method of constructing model Hamiltonians for each class, as well as those for boundaries and defects. We motivate the formulae for the topological invariants and explain the diagonal periodicity in the invariants.

[1]A. Kitaev, Proceedings of the L.D.Landau Memorial Conference Advances in Theoretical Physics, June 22-26, 2008

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