

# Universality of recursive isomorphism

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The hierarchy of countable Borel equivalence relations under the partial order of Borel reducibility has a rich structure that has been studied extensively. We investigate the position of some recursion-theoretic equivalence relations in this hierarchy, and how this is related to other global questions in recursion theory. We show that recursive isomorphism on  $3^\omega$  is a universal countable Borel equivalence relation, and we discuss some combinatorial obstructions to showing that recursive isomorphism on  $2^\omega$  is universal. These obstructions are related to Borel coloring and matching problems.