

Enumerations of Π_1^0 Classes: Acceptability and Decidable Classes

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A Π_1^0 class is an effectively closed set of reals. One way to view it is as the set of infinite paths through a computable tree. We consider the notion of *acceptably equivalent* numberings of Π_1^0 classes. We show that a permutation exists between any two acceptably equivalent numberings that preserves the computable content. Furthermore the most commonly used numberings of the Π_1^0 classes are acceptably equivalent. We also consider decidable Π_1^0 classes in enumerations. A decidable Π_1^0 class may be represented by a unique computable tree *without dead ends*, but we show that this tree may not show up in an enumeration of uniformly computable trees which gives rise to all Π_1^0 classes. In fact this is guaranteed to occur for some decidable Π_1^0 class. These results are motivated by structural questions concerning the upper semilattice of enumerations of Π_1^0 classes where notions such as acceptable equivalence arise.