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http://www.cs.may.ie/∼tnaughton/teaching/se307

Template for undecidability proofs using a mapping reduction

Proof. We will use a mapping reduction to prove the reduction _____.
Assume that _____ is decidable. The function f that maps instances of _____
to instances of _____ is performed by TM F given by the following pseudocode.

$F =$ "On input $\langle$_____$\rangle$:
    1. Construct the following M' given by the following pseudocode.
      $M' =$ "_____

        _____

        _____

        _____

        _____

        _____

        _____

        _____ "

        _____

    2. Output $\langle$_____$\rangle$"

Now, $\langle$_____$\rangle$ is an element of _____ iff $\langle$_____$\rangle$ is an element
of _____. So using f and the assumption that _____ is decidable, we can
decide _____. A contradiction. Therefore, _____ is undecidable. (This
also proves that the complement of _____ is undecidable, because the complement
of any undecidable language is itself undecidable.)