7.4 Rice's Theorem Now that you've solved the previous problem, generalize it and prove the following theorem, called *Rice's Theorem*.

Theorem 7.2 *Let P be a property of programs that depends only on the partial functions that they compute. Assume that there is at least one program Π_1 for which P is true, and at least one program Π_2 for which P is false. Then show that it is undecidable, given a program Π, to tell whether P is true for Π or not.*

Hint: show that for any such property P, we can either reduce the Halting problem either to the problem of telling whether P is true, or reduce it to the problem of telling whether P is false.