300H
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Assignment 1 problem 1

There is a collection of 50 small square tiles. Each tile has a letter on one side and a positive integer on the other side. No other information is known about the tiles. The tiles are laid out, some with letter side up and some with number side up. Someone asks you "Is it true that every tile that has a consonant on one side has an even number on the other side?" You are supposed to answer this question. If you answer it correctly you will win $50, but if you answer it incorrectly you will lose $200. You may pick up any tiles you want and examine them, but you must pay $1 for each tile you pick up. Which tiles should you pick up and examine? Explain your answer.

The statement given has a quantifier baked into it with the use of the word "every." When asking about the truth value, you can see that the statement is an implication, therefore the only way to get a false value out of that statement is to have a truth imply a falsehood. Therefore to falsify the statement above one has to find only one consonant tile with an odd number. In particular if you're not playing against an adversarial opponent flipping over the consonants first should only cost on average $2 to win the $50. But if the worse scenario occurs of the statement being true you'll end up where you started, as you'll earn back the $50 you spent flipping tiles.