Problem 1: Solve Spring 2013 Final Exam Problem 4(a), asking for details about a partially described cache.

Problem 2: Solve Problem 4(b), a really easy hit ratio question.

Problem 3: Consider the code in Problem 4(c). For these questions assume that `b = 0x1000`, with that value of `b` we know that `b[0]` starts at the beginning of a line.

(*a*) What would the hit ratio be if `ASIZE` were 0 (meaning that the `a` array is effectively not part of the structure)? When you compute the hit ratio consider both loops (the one with `sum +=` in the loop body and the one with `norm_val` in the loop body).

(*b*) For what value of `ASIZE` would `Some_Struct` (or `b[0]` or `b[i]`, etc.) be the same size as a cache line?

(*c*) What would the hit ratio be if `Some_Struct` were the size of a cache line? Consider both loops.

(*d*) Find the smallest value for `ASIZE` that will minimize the hit ratio (make things as bad as they can get). (This is part (c) from the test.) Don't forget that this is a set-associative cache.