

## Problem 2

2a) We have chosen the array representation of a polynomial: `RatNum[] coeffs`, where `coeffs[i]` stores the coefficient of the term of exponent `i`. An alternative data representation is the list-of-terms representation: `List<Term> terms`, where each `Term` object stores the term's `RatNum` coefficient and integer exponent. The beauty of the ADT methodology is that we can switch from one representation to the other without affecting the clients of our `RatPoly`. Briefly list the advantages and disadvantages of the array representation versus the list-of-terms representation.

**When using an array to represent data, the exponent is adjusted based on the indexes, resulting in less manual data storage and updates. On the other hand, using a list of terms makes it easier to modify the size of the list and change the number of stored values.**

2b) Where did you include calls to `checkRep` in `RatPoly` (at the beginning of methods, the end of methods, the beginning of constructors, the end of constructors, some combination)? Why?

**I added calls to the constructors' ends since it's necessary to inspect `RatPolys` for issues after every creation. Another point to note is that altering a `RatPoly` only involves either multiplying it by a scalar (which doesn't cause any change) or resetting it to 0 (which, in any case, invokes a constructor).**