3740 group project By Kegan Rieder and Justin Wolfenden

We dealt with this issue by converting the polynomial to the representation that is easiest for the current task, we would then perform the functions using this representation and if necessary, we would change it back to the original representation before returning the value. You can see this demonstrated through add, when it encounters multiple sparse, it will convert these sparse to dense, it will then take the answer it got from the calculation and convert that to sparse before returning it to the user.

A brief explanation of the implementation of all functions

Is-sparse? X

X is a list

First checks if the list is empty, if the list is empty it returns false, if not it will check if the first value in the list is also a list, If the first value is a list it will return true, telling us its sparse, if the first value is not returns false, tells us the list is not sparse

Is-dense? X

X is a list

First checks the list is empty, if empty it returns false, if not it will check if the first value of the list is also a list, if the first item is a list return false, telling us it is not dense. If the first item is not a list return true telling us that it is dense.