Percentage composition

This is closer to chemistry than physics, but it is fun.

Given a substance which is make of more than one constituent, you can determine what percentage of the substance is a particular component by finding the mass of the substance (or weight since they are always proportional) and the mass (or weight) of the specific component and then using the formula

 % composition = 100% \* (mass of part)/(mass of whole)



In this lab you will be given a bag of microwave popcorn. You determine the mass of the entire bag, pop the corn (thereby releasing the water) and then determine the new mass (without the water). Do not forget that there is some junk involved in this (the bag and any kernels which fail to pop). You need to account for the mass of the “junk”.

Data:

1. Mass of bag of popcorn before it is heated.
2. Mass of the bag including popped corn, junk, but no water.
3. Mass of “junk” including bag and kernels which did not pop.

You decide how to do the arithmetic.

Conclusion: Popcorn is \_\_\_\_\_\_percent water.