Workshop 1

Task 1.1: Play and explain (in your own words) the Game Called ‘Observation and Approximation’ for Dependent (a) and Independent (b) variables:

We can find the ratio of almonds and pistachios by

The way we determine the ratio of almonds and pistachios in the first experiment is by drawing one nut after the other and counting which one comes out with an A for almond and P for pistachio. In this instance the nuts are independent variables because we do not know the amount inside the bag therefore we have no knowledge on the ratio of almonds to pistachios. However for example in the experiment if we do 6 tests and pull out 5 pistachios the percentage of pistachios in the bag would be 5/6 = 83%. The 1 Almond picked out would therefore be the remaining percentage at 17%. 6 experiments is a small sample number if we were to repeat the experiment many more times there will be an increase in the accuracy of the prediction and there will also be a clear convergence between the ratio of almonds and pistachios, therefore reinforcing the concept of the weak law of large numbers.