Chapter 1

Conclusion

This table shows what the best k for large and small N is, depending on the distributions. Then whether the distributions imply the bias is of equations **??** and **??**; thus, either $O\left(\frac{1}{N^a}\right)$ or $O\left(\left(\frac{k}{N}\right)^a\right)$.

TODO - check the values of k maybe there is more that one? TODO - look up how to make two lines in table for left column difference in which k is best difference in the order of the bias

Table 1.1: *Summary of Distributions*

	Normal, $N(0,1)$	Uniform, $U[0,100]$	Exponential, $exp(0.5)$
Optimal k for $N \leq 10,000$	2	3	4
Optimal k for $10,000 \leq N \leq 50,000$	$5 or 7$	7	10
Suspected behaviour of $Bias|\hat{H}_{N,k}|$	$O\left(\left(\frac{k}{N}\right)^a\right)$	$O\left(\left(\frac{k}{N}\right)^a\right)$	$O\left(\frac{1}{N^a}\right)$