



**MathsNET**

A joined up approach to  
teaching and learning  
mathematics

# Calculating a histogram

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- Explain what the elements of the probability mass function for a discrete random variable represent.
- Write out the law of large numbers and explain what this theorem tells us about the sum of a large number of random variables
- What is the probability mass function for the auxiliary random variables that we introduce when we calculating the histogram.
- What is the expectation equal to for the auxiliary random variables that we introduce when we calculate the histogram.



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- By making reference to the law of large numbers explain why the histogram converges onto a single function when a large number of experiments are performed.