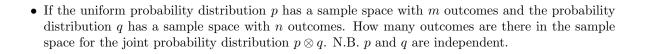
## The information contained in uniform MathsNET distributions

• Explain the meaning of the term functional
• State Khitchines four axioms for the information
• Explain what we mean when we state that a function or functional is monotonically decreasing.
• Now explain why the information in a uniform distribution decreases monotonically with the six of the sample space.

## The information contained in uniform MathsNET distributions A joined up approach to teaching and learning mathematics



• Explain why the information in a uniform probability distribution must be a function of  $\frac{1}{n}$  where n is the number of

• Hence, explain why the information in a uniform distribution, p, is given by:  $I(p) = -k \ln n$ .