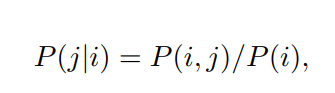
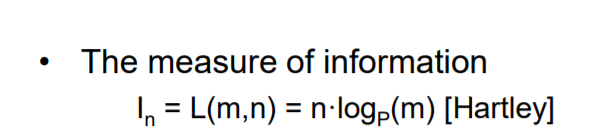
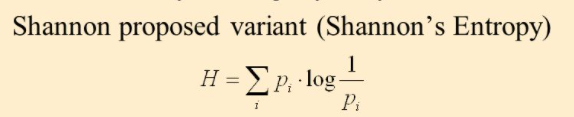
**Conditional probability of letters (a first-order Markov information source)**



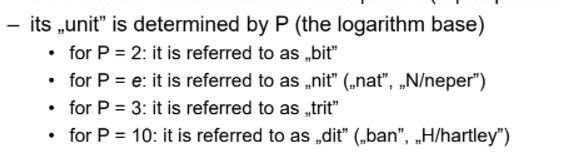
**Measure of information (I)**



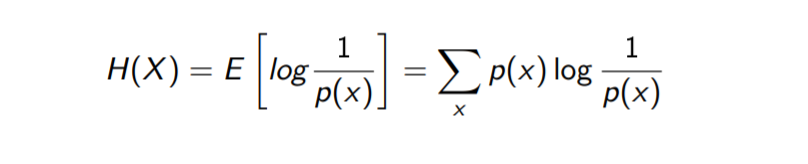
**Shannon’s Entropy**



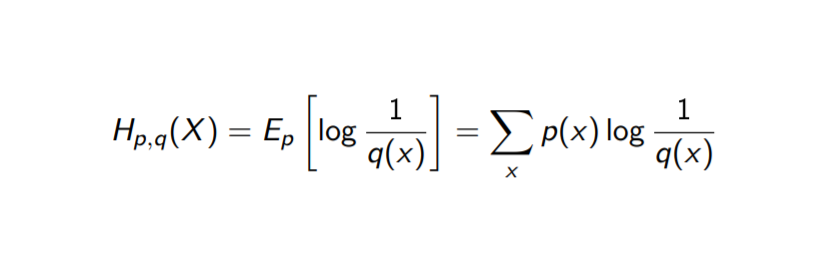
**Bits/nits/trits/dits**



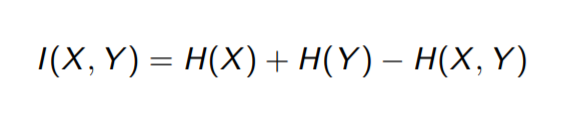
**Entropy formula**



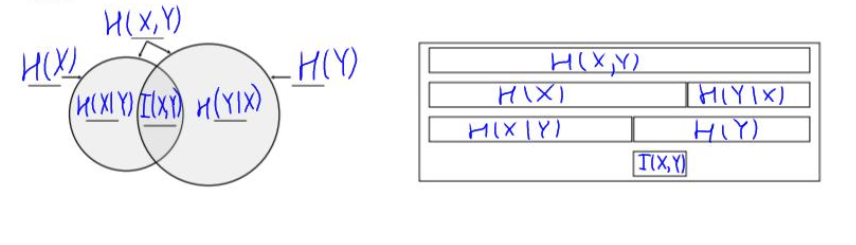
**Cross-entropy formula**



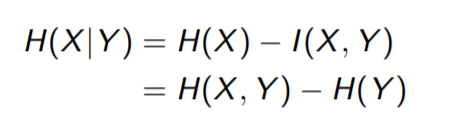
**Mutual information formula**



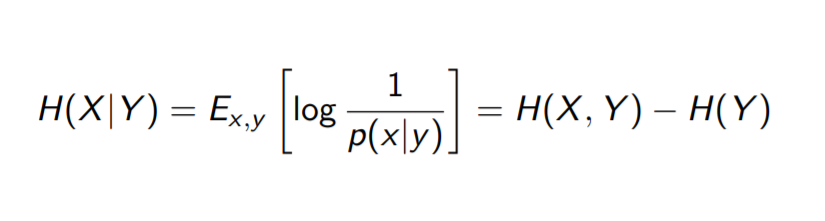
**Visualization of entropy**



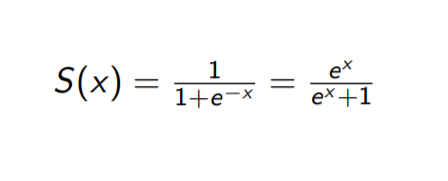
**Conditional entropy**



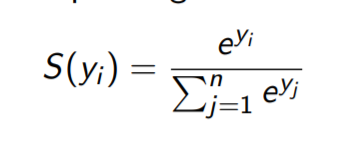
**(another notation)**



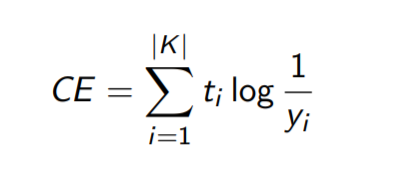
**Sigmoid function for Multi-label problem**



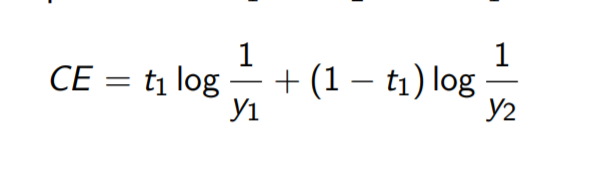
**Softmax function for Multi-class problem**



**Cross-entropy loss**



**Binary cross-entropy**



**Kullback-Leibler divergence (relative entropy)**

