# Heuristics

## Admissibility

A heuristic is admissible if that heuristic is less than or equal to the actual cost of reaching the goal node

## Consistency

Heuristic of must be less than or equal to the cost of travelling to ALL neighbouring nodes plus their heuristic

## Theorem

If a heuristic is **consistent**, it is **also admissible**:

If a heuristic is **admissible**, there is **no guarantee** that it is **consistent**:

# Distance

## Manhattan Distance

Flat distance between variables

## Euclidean Distance

Straight-line distance between variables

# Hand Training Perceptrons

## Init:

## Each Iteration:

## Vector Dot Product

# Entropy

Entropy of a variable, M, is denoted by

is the probability of that variable occuring in that dataset. For example, getting a 1 on a dice roll (not rigged) .

A diagram of a weather forecast

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## Remainder

A diagram of a flowchart

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## Information Gain

# Naïve Bayes

## Mean

## Standard Deviation

## Probability Density Function

# Differential Calculus

|  |  |
| --- | --- |
| Function | Derivative |
|  |  |
|  |  |
|  |  |
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# BackPropagation

A math equations and formulas

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# Bayesian Networks

## Chain Rule

## Full Joint Distribution

## Enumeration

Determining the probability of given observed evidence, , and “summing out” hidden variables, .

Example:

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## Variable Elimination

A black and pink math symbols

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A blue and white rectangular object with black text

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## A screenshot of a computer AI-generated content may be incorrect.

## Normalization