

# Hamming distance (from Wikipedia)

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- „In information theory, the **Hamming distance** between two strings of equal length is the number of positions for which the corresponding symbols are different. Put another way, it measures the number of *substitutions* required to change one into the other, or the number of *errors* that transformed one string into the other“.

## For example:

- The Hamming distance between **1011101** and **1001001** is 2.
- The Hamming distance between **2143896** and **2233796** is 3.
- The Hamming distance between "**toned**" and "**roses**" is 3.
  
- For **binary strings**  $a$  and  $b$  the Hamming distance is equivalent to the number of ones in  $a \text{ xor } b$ .
  
- Source: Wikipedia  
[http://en.wikipedia.org/wiki/Hamming\\_distance](http://en.wikipedia.org/wiki/Hamming_distance)