WHAT IS COMPUTATION?
WHAT IS COMPUTABLE?

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WHAT IS A COMPUTATION?

Computation is any type of calculation that follows a well-defined model understood and expressed as, for example, an algorithm.
NP PROBLEMS

Nondeterministic Polynomial problems

• Jigsaw Puzzle: $O(N!) - O(N)$

• Nonprime Number: Exponential - Polynomial

• Prime Number??

NP Complete Problems
HALTING PROBLEM
Computability theory, also called recursion theory, is a branch of mathematical logic, of computer science, and of the theory of computation that originated in the 1930s with the study of computable functions and Turing degrees.

• What does it mean for a function on the natural numbers to be computable?

• How can noncomputable functions be classified into a hierarchy based on their level of noncomputability?
RESOURCES

• https://en.wikipedia.org/wiki/Computation
• https://en.wikipedia.org/wiki/Computability_theory#Computable_and_uncomputable_sets
• http://www.i-programmer.info/babbages-bag/338-computability.html
• https://en.wikipedia.org/wiki/Turing_degree