Analysis of Algorithmic efficiency.

Why ?

$\longrightarrow$ To predict behaviour of an algorithm before its implementation

$\longrightarrow$ To compare different algorithms based on their performance to a specific input

$\longrightarrow$ To study various factors on which efficiency depends

WHAT ARE THESE FACTORS?

↳ Resource Allocation

↳ Dependencies

↳ Specific Technologies

↳ Communication channels

↳ Other factors

} System Variables

SOLUTION ?

Asymptotic Analysis

↳ Measure the efficiency of algorithms based on the factors that are not system dependent.

↳ One of these can be size of input

Objectives Of Asymptotic Analysis

(1) Simplicity

(11) Comparability

(111) Scalability