

Tackle Complexity:

Math

Math: Organize - Data.

- Collections of objects.

Set. sequence. Function.
propositions. relationship.

• Abstract Data type -

A mathematical object together with operations on that object.

Integer

+
* -
/

• Data Structure -

A particular implementation of an Abstract Data Type.

int

short

long

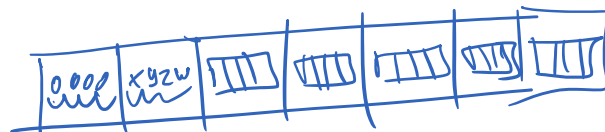
ADT | DS

ADT	DS
Integer	int, long
Real Numbers	float, double

Selection of a DS depends on the relevant ADT operations necessary to solve the problem

Ex: "What is the sum of the digits of 100!?"

$$100! = 100 \cdot 99 \cdot 98 \cdot 97 \cdot 96 \cdot \dots \cdot 2$$



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Data Structures building blocks

- Classes
- Arrays
- Pointers