## Primer on Thinking

- Thought / Idea
  - Concept
  - Affirmation
- Concept
  - image/idea without any claim
  - Occurs as words, phrases, non-informative sentences
- Affirmation
  - Assent / Proposition
  - Occurs as complete sentences, where one concept is predicated to another

## Primer on Thinking

- Concepts / Affirmations could be either:
  - Simple (understood without inference)
  - Complex (require inference)
- Simple ideas are obviously understood and require no explanation or proof
- Complex ideas require explanation/proof utilizing simple concepts /affirmations

### Ideas as Sentences

- Informative
  - Information is being conveyed
  - E.g. She is in the class
- Non-informative sentence
  - No information is being conveyed
  - Examples are requests, questions, call outs, hope, exclamation
- Informative sentences can be verified as True / False while noninformative sentences cannot.

### LANGUAGE

#### **COGNITION**

#### LOGIC

Words / Phrases

Concepts

Terms

Sentences

Propositions

Premises

Paragraphs

Reasons

Arguments

If he falls on the stairs, he will break his legs

His leg is broken as he fell on the stairs

## Arguments vs Explanations

- Arguments
  - Objective is to convince / persuade
  - Comprises of evidence
- Explanation
  - Objective is to clarify something
  - Comprises of causes and consequences (facts)

Everyday (conf)USE:

"The dog might be injured because he got in a fight"

#### "The dog might be injured because he got in a fight"

The owner of the dog has just watched it fight another dog. The dog does no seem injured The owner of the dog has not seen the dog for a few hours. It comes to the owner hurt and crying All humans need food

• Ravi is a human

• Therefore, Ravi needs food

• If you work hard you will pass

You worked hard

• Therefore, you passed

A number is either even or odd

• This number is not even

• Therefore, this number is odd

# Parts of an Argument

All MEN are MORTAL

SOCRATES is a MAN

• Therefore, SOCRATES is MORTAL

# Parts of an Argument

All MEN are MORTAL

SOCRATES is a MAN

Premises (propositions)

• Therefore, SOCRATES is MORTAL

# Parts of an Argument

All MEN are MORTAL

SOCRATES is a MAN

Terms (concepts)

• Therefore, SOCRATES is MORTAL