Logic: A logic must be defined by the semantics or meaning of a fact (or sentence), The semantics defines the truth of each sentence with respect to each possible world.

e.g., "x + y = 4" is true if x = 1 } x = 2 ? x = 3 } y = 3 } y = 2 } y = 1

false if x = 1 $\begin{cases} x = 1 \end{cases}$ $\begin{cases} x = 1 \end{cases}$ $\begin{cases} x = 1 \end{cases}$

In standard logic every logic must be either true or false. There is no in between.

 $\alpha \models \beta \text{ iff } M(\alpha) \subseteq M(\beta)$ $\beta \text{ follows logically from another } \alpha$.

6		- G	13 53555 Strench	14
Agent	25	232	23	24
	315111 Strend	32	33 Ġ	34
	41 G	12 1	5) 9 1 1 Strend 43	h 44

KB: There are some Gold Coins and some Strench'es in some of.

The grids squares.

G: There are "gold Coin" in sur Squares [1,2], [3,3] and [4,1]

GF: There are gold coin in Squares [1,1], [1,3], and [1,4]

{ Hunt the Winners. Pokemon

$$KB \models G$$
 $KB \not\models S$
 $KB \not\models S$
 $KB \not\models S$

S: There are Strench in Squares [1,3], [3.1] and [4,3] SF: There are Strench in Squares [1,1], [1,3] and [1,4]

Logical in ference: Let an inference algorithm i can derived from KB by i, This is known as logical inference.

KB | \(\alpha \times | \t

> Sentence Representation Semantics semanties -Real Aspects of World > Aspects of the real world Follows the real world How do we know that KB is frue? KB is created as per some referancial truth. I.e., KB is considered true as per the Knowledge of the real world. Syntax: The syntax defines the allowable sentence. Complex sentence and Logical connections. T(not): Negation. A literal is either an afomic sentence (a positive literals), or.

a negated atomic sentence (a negative literals).

Conjunction v (or): disjunction : implies (implication) => : bi conditional (if and only if)

ropeny of
Proposional logic: i) de clarative language
Semantics is based on truth relation between Sentence and possible worlds.
Sentence and possible worlds.
ii> Expressive
· Use partial information of disjunction and negation
(11) Compositionality
. The meaning of a sentence (facts) is the
· The meaning of a sentence (facts) is the function of the meaning of its parts.
e.g., meaning of F = F, AF2
=> meaning of F, and F2
Disadvantage: In multi-objects environment each
rule need to be writeen(design) seperately.
Contextual Logic: Logical Resioning based on
the world.
the contexts of the resolution A, A A2A-AA3>C
$[A_1, A_2, A_3]$ $[A_1, A_2, A_4]$ $[A_1, A_3, A_4]$ $[A_2, A_3, A_4]$
A
[A, A2] [A, A3] [A, A4] [A, A4] [A, A4] [A, A4] [A, A4]
$\begin{bmatrix} A1 \end{bmatrix} \begin{bmatrix} A2 \end{bmatrix} \begin{bmatrix} A3 \end{bmatrix} \begin{bmatrix} A4 \end{bmatrix}$

Propositional Logic	No
Tom is a cat	
① cat (Tom) ← Logical rependence of the control of	presentation of an entence.
Let we represent the following	fact.
"All cat has a tail"	
(2) $\forall x : Cat(x) \rightarrow has_tail(x)$.	
Now using deduction med	
resing propositions D& @	D) we can conclude
Chas-tail (Tom). English Representation	The second secon
English Representation	Tom has a tail"
linitial	Final
facts	facts
Forward * representation mapping internal	back word representation of. mapping.
	xecution
of initial facts for of	internal epresentation
internal	
representation mapping	
	- Times -