entailment

- Entailment is when a sentence follows from another $\alpha \models \beta$
- $\alpha \models \beta$ iff in every model where α is true, β is also true.
- $\alpha \models \beta$ iff $M(\alpha) \subseteq M(\beta)$.

basic actions of logical agents

we can tell it facts for ask for inference

a knowledge base keeps track of things

knowledge based agents

at every step

constructs a sentence asserting that action

construct a sentence asking what action is next

construct a sentence with assertion about percepts

a logic has syntax

semantics define the truth of a sentence

models describe possible worlds. m(alpha) is the set of all models of alpha

if sentence alpha is true for model m, alpha satisfies m