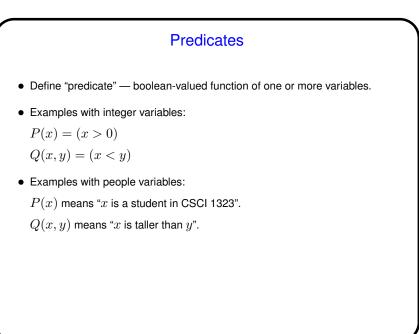
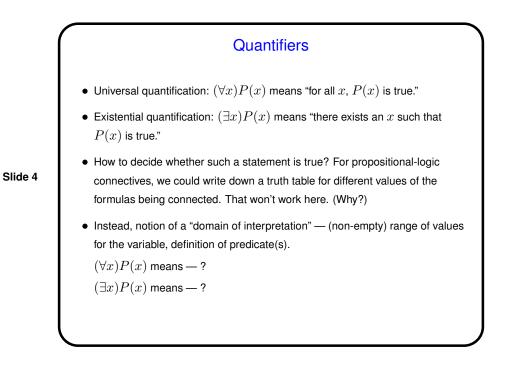
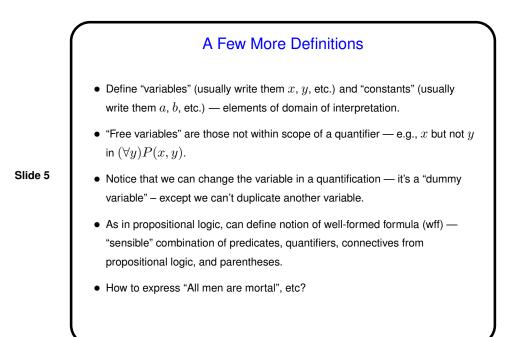


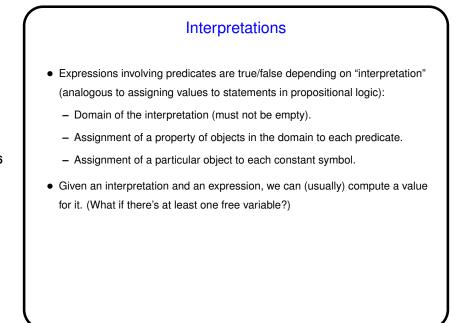
Slide 2

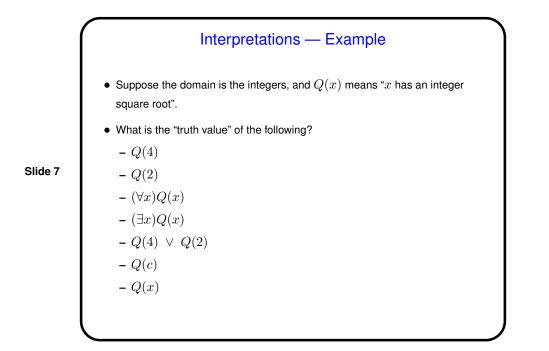
Why Predicate Logic? Propositional logic captures some of what we need to talk about things logically, but not everything. Example from classical logic: "All humans are mortal. Socrates is human. Therefore Socrates is mortal." No way to express this in propositional logic. What we want to add is some way to express the idea of something being true "for all x" or "for at least one x".











English to Formulas• Given people as a domain and predicates-C(x) meaning "x is a CS student"-D(x) meaning "x must pass CSCI 1323 to graduate"-B(x) meaning "x is a business major"-M(x) meaning "x likes math"• Translate:- "All CS majors must pass CSCI 1323 to graduate."- "Some CS majors are business majors."- "Some CS majors like math."- "Not all CS majors like math."

