

1. Determine whether the following arguments are propositionally valid and whether they are valid:
 - (a) All men are mortal. Socrates is a man. Therefore, Socrates is mortal.
 - (b) All orcas are whales, and all whales are mammals. Therefore, all orcas are mammals.
 - (c) If Willy is an orca, Willy is a whale. And if Willy is a whale, Willy is a mammal. Therefore, if Willy is an orca, Willy is a mammal.
2. Consider the following definitions and examples:
 - (a) A **designator** is an expression whose primary function is to designate something. Examples: 'Nurit', 'Gabriel', 'Los Angeles', etc.
 - (b) A **predicate** is an expression whose primary function is to say of something that it is a certain way. Examples: 'is a dog', 'dog', 'runs', etc.
 - (c) A **quantifier phrase** is an expression used to indicate generality. Examples: 'something', 'every', 'someone', etc.
3. Identify which of the expressions in (1) are designators, predicates and quantifier phrases.