

## Argument form

- ⊗ We define an argument form as any array of symbols containing statement variables but no statements, such that when statements are substituted for the statement variables - the same statement ~~be~~ being substituted for the same statement variable throughout - the result is an argument.
- ⊗ statement variables -  $p, q, r, s$
- ⊗ An argument form is invalid if and only if it has at least one substitution instance with true premises and a false conclusion.
- ⊗ An argument form is valid if and only if it has no substitution instances with true premises and a false conclusion.

Argument form :

$$p \supset q \quad p \supset a$$

$$p \quad q \supset r$$

$$\therefore q \supset r$$

Valid argument forms

$$(I \vee J) \supset (I \cdot J)$$

$$\sim (I \vee J)$$

$$\therefore \sim (I \cdot J)$$

~~This~~ This argument has  
the specific form  
इति सुक्तिरा प्रामाण्यम

$$(p \vee q) \supset (p \cdot q)$$

$$\sim (p \vee q)$$

$$\therefore \sim (p \cdot q)$$

p	q	p ∨ q	p · q	(p ∨ q) ⊃ (p · q)	~(p ∨ q)	~(p · q)
T	T	T	T	T	F	F
T	F	T	F	F	F	T
F	T	T	F	F	F	T
F	F	F	F	T	T	T

Valid (Note: Fallacy of denying the antecedent is not committed here!)