S * T → S (premise)
S * T (premise)
S (conclusion)

Specific arguments with similar forms have the same validity.

P * Q (premise)
Therefore, P (AND elimination)

NOTE, order of symbols matter even if they don't affect validity

John is sick or John is bored
John is not sick
∴ ⇒ John is bored

P, Q, Z

P ∨ Q
~P
→ Q

Example:
John is sick or John is bored.
John is not sick.
Therefore, John is bored.

One can symbolize this argument as the argument form:
(i) S v B
~ S
therefore, B

But this is talking in terms of specific statements of a specific argument. We can also show its general argument form, by saying that the argument in (i) HAS the form:

(ii) p v q
~ p
therefore, q

Specific argument form

Specific argument form = "Specific argument form is an array of symbols that contains statement variables – each statement variable stands for a distinct **simple** statement – such that when statements are substituted for statement variables, the result is an argument. "

Testing validity

Premise true ⇒ conclusion must not be false for argument being valid

p	q	p ∨ q	~p
1	1	1	0
1	0	1	0
0	1	1	1
0	0	0	1

There are three valid argument forms (argument formulas/equations) which are based on conditional/implication.

Any specific argument that is based on those argument forms shall also be valid.

These three argument forms are:

Modus ponens, modus tollens and hypothetical syllogism.

Affirm consequent by affirming antecedent

Affirm 'q' by affirming 'p'

$p \rightarrow q$

p

Therefore q

p	q	r	(p→q)
1	1	1	1
1	0	1	0
0	1	1	1
0	0	1	1

r: statement with connective

Modus Tollens

Denying Antecedent by denying consequent

$p \to q$
$\sim q$
$\therefore \sim p$

$p \to q$
$\sim p$
$\sim q$

$p \to q$
q
$\therefore p$

Affirming the consequent

Hypothetical syllogisms

Denying the antecedent