Testing and Demonstrating Validity

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- the conditional (_____$\rightarrow$_____)
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Put sentences in the blanks and you get a resulting sentence.

Conditionals

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So we have a special name for each the two parts.

- The "before the arrow" part is the *antecedent*
- The "after the arrow" part is called the *consequent*

Ways of saying conditionals in English

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P→Q:

- "If P, then Q"   (notice that whatever comes after a plain old "if" is the antecedent, ...)
- "Q if P"   (... no matter where the English "if" appears)
- "P only if Q"   (notice that whatever comes after a plain old "only if" is the consequent...)
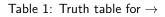- "Only if Q, P"   (... no matter where the English "only if" appears)
- "Provided that P, Q"
- "Q, provided that P."
- "P is a sufficient condition for Q."
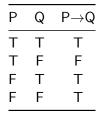- "Q is a necessary condition for P."

Table 1: Truth table for $\rightarrow$

P	Q	P$\rightarrow$Q
T	T	T

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That is, the only case where we'll say that a conditional is false is when its antecedent is TRUE and its consequent is FALSE.