

If-Then Statements

Jonathan R. Bacolod

Sauyo High School

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5. If two lines intersect, then they are not parallel.

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- ▶ also called Conditional Statement
- ▶ formed by joining two statements p (hypothesis) and q (conclusion) using the words *if* and *then*

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What is Simple Implication?

Simple Implication: a simple flow of reasoning from the if-clause to the then-clause

What is Simple Implication?

Truth Table of Simple Implication

p	q	$p \rightarrow q$
T	T	T
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$p \rightarrow q$: If 8 is an odd number, then 9 is composite.

\therefore since p is false and q is true, then $p \rightarrow q$ is true.

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p : A right angle measures 90° .

q : Parallel lines intersect.

$p \rightarrow q$: If a right angle measures 90° , then parallel lines intersect.

\therefore since p is true and q is false, then $p \rightarrow q$ is false.

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Thank you for watching.