Vocabulary Flash Cards

biconditional statement *Chapter 2 (p. 69)*	**conclusion** *Chapter 2 (p. 66)*
conditional statement *Chapter 2 (p. 66)*	**conjecture** *Chapter 2 (p. 76)*
contrapositive *Chapter 2 (p. 67)*	**converse** *Chapter 2 (p. 67)*
counterexample *Chapter 2 (p. 77)*	**deductive reasoning** *Chapter 2 (p. 78)*

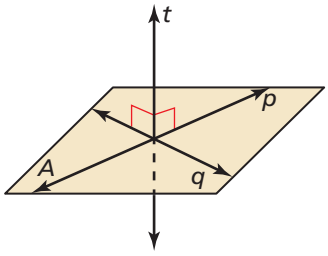
Vocabulary Flash Cards

The "then" part of a conditional statement written in if-then form If you are in Houston, then you are in Texas. hypothesis, p conclusion, q	A statement that contains the phrase "if and only if" Two lines intersect to form a right angle if and only if they are perpendicular lines.
An unproven statement that is based on observations Conjecture: The sum of any three consecutive integers is three times the second number.	A logical statement that has a hypothesis and a conclusion If you are in Houston, then you are in Texas. hypothesis, p conclusion, q
The statement formed by exchanging the hypothesis and conclusion of a conditional statement Statement: If you are a guitar player, then you are a musician. Converse: If you are a musician, then you are a guitar player.	The statement formed by negating both the hypothesis and conclusion of the converse of a conditional statement Statement: If you are a guitar player, then you are a musician. Contrapositive: If you are not a musician, then you are not a guitar player.
A process that uses facts, definitions, accepted properties, and the laws of logic to form a logical argument You use deductive reasoning to write geometric proofs.	A specific case for which a conjecture is false Conjecture: The sum of two numbers is always more than the greater number. Counterexample: $-2 + (-3) = -5$ $-5 \not> -2$

Vocabulary Flash Cards

equivalent statements *Chapter 2 (p. 67)*	**flowchart proof (flow proof)** *Chapter 2 (p. 106)*
hypothesis *Chapter 2 (p. 66)*	**if-then form** *Chapter 2 (p. 66)*
inductive reasoning *Chapter 2 (p. 76)*	**inverse** *Chapter 2 (p. 67)*
line perpendicular to a plane *Chapter 2 (p. 86)*	**negation** *Chapter 2 (p. 66)*

Vocabulary Flash Cards

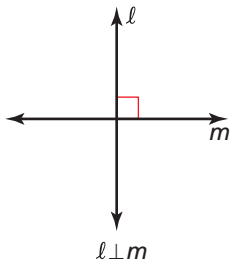
A type of proof that uses boxes and arrows to show the flow of a logical argument	Two related conditional statements that are both true or both false A conditional statement and its contrapositive are equivalent statements
A conditional statement in the form "if p, then q", where the "if" part contains the hypothesis and the "then" part contains the conclusion If you are in Houston, then you are in Texas. hypothesis, p conclusion, q	The "if" part of a conditional statement written in if-then form If you are in Houston, then you are in Texas. hypothesis, p conclusion, q
The statement formed by negating both the hypothesis and conclusion of a conditional statement Statement: If you are a guitar player, then you are a musician. Inverse: If you are not a guitar player, then you are not a musician.	A process that includes looking for patterns and making conjectures Given the number pattern 1, 5, 9, 13, …, you can use inductive reasoning to determine that the next number in the pattern is 17.
The opposite of a statement If a statement is p, then the negation is "not p," written $\sim p$. Statement: The ball is red. Negation: The ball is *not* red.	A line that intersects the plane in a point and is perpendicular to every line in the plane that intersects it at that point  Line t is perpendicular to plane P.

Vocabulary Flash Cards

paragraph proof *Chapter 2 (p. 108)*	**perpendicular lines** *Chapter 2 (p. 68)*
proof *Chapter 2 (p. 100)*	**theorem** *Chapter 2 (p. 101)*
truth table *Chapter 2 (p. 70)*	**truth value** *Chapter 2 (p. 70)*
two column proof *Chapter 2 (p. 100)*	

Vocabulary Flash Cards

Two lines that intersect to form a right angle



A style of proof that presents the statements and reasons as sentences in a paragraph, using words to explain the logical flow of an argument

A statement that can be proven

Vertical angles are congruent.

A logical argument that uses deductive reasoning to show that a statement is true

A value that represents whether a statement is true (T) or false (F)

See truth table.

A table that shows the truth values for a hypothesis, conclusion, and a conditional statement

Conditional		
p	q	$p \rightarrow q$
T	T	T
T	F	F
F	T	T
F	F	T

A type of proof that has numbered statements and corresponding reasons that show an argument in a logical order