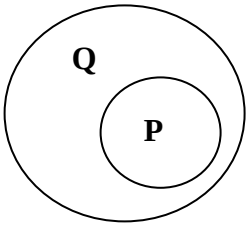
Geometry SOL Practice
Topic #1: Logic
Notes

Conditional Statements are sentences in if – then form.

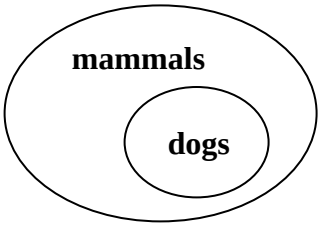
form	*generalization*	*example*
Original	If P , then Q.	If it's a dog, then it's a mammal.
Converse	If Q , then P.	If it's a mammal, then it's a dog.
Inverse	If ~P , then ~Q.	If it's ***not*** a dog, then it's ***not*** a mammal.
Contrapositive	If ~Q , then ~P.	If it's ***not*** a mammal, then it's ***not*** a dog.

Venn Diagrams are conditional statements in visual form.

If **P**, then **Q**.



If it's a dog, then it's a mammal.



Logic

Law of Syllagism is the transitive property using conditional statements.

	generalization	*example*
Given	If **P**, then **Q**. If **Q**, then **R**.	If it's a dog, then it's a mammal. If it's a mammal, then it is warm-blooded.
Conclusion	If **P**, then **R**.	If it's a dog, then it's warm-blooded.

Law of Detachment

	generalization	*example*
Given	If **P**, then **Q**. An example of **P**.	If it's a dog, then it's a mammal. Spot is a dog.
Conclusion	The example applies to **Q**.	Spot is a mammal.