Conditional Statements

(hypothesis) If you are complaining, then everyone will get annoyed.

(conclusion)

A conditional statement is a statement that can be written in if-then form:

If-then form: If hypothesis, then conclusion

Ex. All hippos are purple.

If-then form: If an animal is a hippo, then it is purple.
Hypothesis: An animal is a hippo
Conclusion: It is purple.

Related Conditional Statements

Original: If an animal is a hippo, then it is purple.
Converse: Switch the hypothesis and conclusion
Ex: If an animal is purple, then it is a hippo

Inverse: Negate the hypothesis and conclusion
Ex: If an animal is not a hippo, then it is not purple

Contrapositive: Switch and negate the hyp and conc
Ex: If an animal is not purple, then it is not a hippo.

Deductive Reasoning

Law of Detachment

If $H$, then $C$
Object is $H$
So... object is $C$

Law of Syllogism

If $H$, then $C$.
If $C$, then new $C$
So... If $H$, then new $C$.

Venn Diagram

Things that are purple (conclusion)

Hippos (hypothesis)