

8. **A tautology is a compound statement which is true regardless of the truth values of the statements of which it is composed.**
9. **The converse of a conditional is formed by switching the order of p and q of the original conditional.**
10. **The inverse of a conditional is formed by negating both the antecedent and the consequence.**
11. **The contrapositive of a conditional is formed by the inverse of the converse, that is, by negating both p and q and reversing their order.**
12. **A statement formed by the conjunction of the conditionals $p \rightarrow q$ and $q \rightarrow p$ is a bi-conditional. The phrases "necessary and sufficient" and "if and only if" are bi-conditionals.**
13. **Whenever two statements are always either both true or both false, the two statements are equivalent.**

Rules of logic suggested by the French mathematician & philosopher, Rene Decartes (1596-1650) include:

- **Never accept anything but clear distinct ideas.**
- **Divide each problem into as many parts as required to solve it.**
- **Thoughts must follow an order from the simple to the complex. Where there is no order, one must be assumed.**
- **One should check thoroughly to assure no detail has been overlooked.**

Then there was the preacher with this note in the margin of his sermon, "Shout, the point is weak!"