

# Questions on the Principle of Bivalence, the Law of Contradictories, the Law of NonContradiction, and the Law of the Excluded Middle

## Questions

1. If “Y” is a statement (or proposition), what is its contradictory?
2. The Law of NonContradiction is the logical law that every contradiction a false conjunction, but what is a *contradiction*? In other words, how does a contradiction differ from other kinds of false conjunctions?
3. Explain why “ $X \wedge \sim X$ ” is a contradiction.
4. Even if “ $X \wedge Y$ ” is a false conjunction, it is not a contradiction, but why not? Explain.

5. If someone believes that “C” is either true or false, which law, principle, or rule of logic do they accept? Explain.
6. If someone believes that “ $X \vee \sim X$ ” is always true, then which law, principle, or rule of logic do they accept? Explain.
7. If someone believes that “ $X \wedge \sim X$ ” is always false, then which law, principle, or rule of logic do they accept? Explain.
8. How are the Law of Contradictories and the Law of NonContradiction different? Explain.

9. The Law of the Excluded is the law that every dichotomy is a *true* conjunction, however *why* would every disjunction of contradictory disjuncts be a true conjunction? Explain.

10. The Law of NonContradiction is the law that every contradiction is a *false* conjunction, but *why* would every conjunction of contradictory conjuncts be a false conjunction? Explain.