

# Math 2283 - Introduction to Logic

Quiz #8 - 2016.02.03

Name: \_\_\_\_\_

---

1. What is the difference between the *Rule of Replacement* and the *Rule of Substitution*?
2. State, in symbolic logic form, the *Rule of Detachment*.
3. Assuming the sentence:  $(p \wedge q) \rightarrow q$ , explain why  $[(p \vee q) \wedge (q \vee r)] \rightarrow (q \vee r)$  must also be true, using only three words.
4. Assuming that  $x = 5$  and  $x^2 + 3xy - 4 = 0$  are true sentences, explain why  $x^2 + 15y - 4 = 0$  must also be true, using only three words.