Law of Quadratic Reciprocity

Let p, q be odd primes and $p \neq q$
Let pRq mean $x^2 \equiv p \bmod q$ for some $x \in \mathbb{Z}$
Let pNq mean $x^2 \not\equiv p \bmod q$ for all $x \in \mathbb{Z}$

Case I

If $p = 1 + 4n$, for some $n \in \mathbb{Z}$
then either pRq and qRp or pNq and qNp

Case II

If $p = 3 + 4m$, $q = 3 + 4n$ for some $m, n \in \mathbb{Z}$
then either pRq and qNp or pRq and qNp

- Karl Friedrich Gauss (1801)