

Theorem 8.5 (Marriage Theorem)

In a collection of r women and r men, a total of r marriages between acquainted couples is possible *if and only if* for each integer k with $1 \leq k \leq r$, every subset of k women is collectively acquainted with at least k men.

Symbolically: In a collection of r women and r men, a total of r marriages between acquainted couples is possible \Leftrightarrow for each integer k with $1 \leq k \leq r$, every subset of k women is collectively acquainted with at least k men.